



United Republic of Tanzania

NATIONAL SAMPLE CENSUS OF AGRICULTURE
2002/2003

Volume Vu: REGIONAL REPORT: **MANYARA REGION**



Cattle Rearing



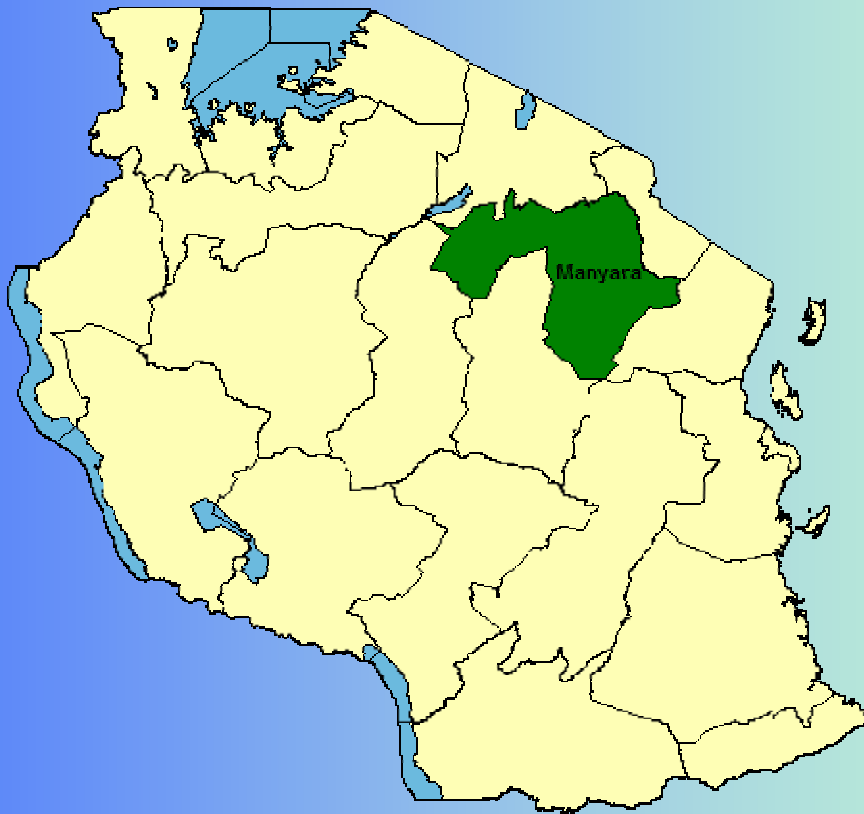
Fish Harvesting



Eggs Production



Maize Planting



Paddy Growing



Hand Cultivation



Indigenous Chicken



Irrigation Practice



Orange Marketing



Cassava Planting



Goats Rearing



United Republic of Tanzania

**NATIONAL SAMPLE CENSUS
OF AGRICULTURE
2002/2003**



VOLUME Vii: REGIONAL REPORT: MANYARA REGION

*National Bureau of Statistics, Ministry of agriculture and Food Security,
Ministry of Water and Livestock Development, Ministry of Cooperatives and Marketing,
Presidents Office, Regional Administration and Local Government,
Ministry of Finance and Economic Affairs – Zanzibar*

December 2007

TABLE OF CONTENTS

Table of contents.....	i
Acronyms.....	iv
Preface.....	v
Executive summary.....	vi
Illustrations.....	xii
CENSUS RESULTS AND ANALYSIS	
PART I: BACKGROUND INFORMATION.....	1
1.1 Introduction.....	1
1.2 Geographical Location and Boundaries.....	1
1.3 Land Area.....	1
1.4 Climate.....	1
1.4.1 Temperature.....	1
1.4.2 Rainfall.....	1
PART II: INTRODUCTION.....	1
2.1 The Rationale for Conducting the National Sample Census of Agriculture.....	1
2.2 Census Objectives.....	3
2.3 Census Coverage and Scope.....	2
2.4 Legal Authority of the National Sample Census of Agriculture.....	3
2.5 Reference Period.....	3
2.6 Census Methodology.....	3
2.6.1 Census Organization.....	4
2.6.2 Tabulation Plan.....	4
2.6.3 Sample Design.....	4
2.6.4 Questionnaire Design and Other Census Instruments.....	5
2.6.5 Field Pre-Testing of the Census Instruments.....	5
2.6.6 Training of Trainers, Supervisors and Enumerators.....	5
2.6.7 Information, Education and Communication (IEC) Campaign.....	6
2.6.8 Household Listing.....	6
2.6.9 Data Collection.....	6
2.6.10 Field Supervision and Consistency Checks.....	6
PART III: CENSUS RESULTS AND ANALYSIS.....	9
3.1 Holding Characteristics.....	9
3.1.1 Type of Holdings.....	9
3.1.2 Livelihood Activities/Source of Income.....	9
3.1.3 Sex and Age of Heads of Households.....	9
3.1.4 Number of Household Members.....	13
3.1.5 Level of Education.....	13
- Literacy.....	13
- Literacy Level for Household Members.....	13
- Literacy Rates for Heads of Households.....	13
- Educational Status.....	13
3.1.6 Off-farm Income.....	14
3.2 Land Use.....	15
3.2.1 Area of Land Utilised.....	16
3.2.2 Types of Land use.....	16
3.3 Annual Crops and Vegetable Production.....	16
3.3.1 Area Planted.....	16
3.3.2 Crop Importance.....	17
3.3.3 Crop Types.....	17
3.3.4 Cereal Crop Production.....	18
3.3.4.1 Maize.....	21

3.3.4.2	Sorgham	21
3.3.4.3	Other Cereals	22
3.3.4.4	Oil Seed Production.....	22
3.3.7.1	Sunflowers	22
3.3.6	Pulse Crops Production	23
3.3.6.1	Beans.....	26
3.3.5	Roots and Tuber Crops Production	26
3.3.5.1	Cassava	27
3.3.8	Fruits and Vegetables	28
3.3.8.1	Tomatoes	29
3.3.8.2	Onion	29
3.3.9	Other Annual Crops Production.....	29
3.4	Permanent Crops.....	29
3.4.1	PigeonPea	34
3.4.2	Banana	34
3.5	Inputs/Implements Use	35
3.5.1	Methods of land clearing	35
3.5.2	Methods of soil preparation.....	35
3.5.3	Improved seeds use.....	35
3.5.4	Fertilizers use.....	41
3.5.4.1	Farm Yard Manure Use.....	42
3.5.4.2	Inorganic Fertilizer Use.....	43
3.5.4.3	Compost Use 45	
3.5.5.1	Insecicide Use.....	46
3.5.5.2	Herbicide Use	46
3.5.5.3	Fungicide Use	47
3.5.6	Harvesting Methods.....	48
3.5.7	Threshing Methods	48
3.6	Irrigation	48
3.6.1	Area planted with annual crops and under irrigation.....	48
3.6.2	Sources of water used for irrigation	49
3.6.3	Methods of obtaining water for irrigation.....	51
3.6.4	Methods of water application	51
3.7	Crop Storage, Processing and Marketing	51
3.7.1	Crop Storage	51
3.7.1.1	Method of Storage	52
3.7.1.2	Duration of Storage	52
3.7.1.3	Purpose of Storage.....	53
3.7.1.4	The Magnitude of Storage Loss	53
3.7.2	Agro processing and by-products.....	55
3.7.2.1	Processing Methods.....	55
3.7.2.2	Main Agro-processing Products.....	56
3.7.2.3	Main use of primary processed Products	56
3.7.2.4	Outlet for Sale of Processed Products.....	57
3.7.3	Crop Marketing.....	57
3.7.3.1	Main Marketing Problems.....	58
3.7.3.2	Reasons for Not Selling.....	58

3.8	Access to Crop Production Services.....	58
3.8.1	Access to Agricultural Credits	58
3.8.1.1	Source of Agricultural Credits	59
3.8.1.2	Use of Agricultural Credits	59
3.8.1.3	Reasons for not using agricultural credits.....	59
3.8.2	Crop Extension	59
3.8.2.1	Sources of crop extension messages	60
3.8.2.2	Quality of extension.....	60
3.9	Access to Inputs	61
3.9.2	Inorganic Fertilisers	61
3.9.3	Improved Seeds	62
3.9.4	Insecticides and Fungicide	62
3.10	Tree Planting.....	63
3.11	Irrigation and Erosion Control Facilities	64
3.12	Livestock Results.....	66
3.12.1	Cattle Production	66
3.12.1.1	Cattle Population	66
3.12.1.2	Herd size	67
3.12.2	Goat Production	67
3.12.2.1	Goat Population	67
3.12.2.2	Goat Herd Size.....	67
3.12.2.3	Goat Breeds.....	68
3.12.3	Sheep Production.....	68
3.12.3.1	Sheep Population	77
3.12.3.2	Sheep Population Trend	77
3.12.4	Pig Production	68
3.12.4.1	Pig Population Trend.....	68
3.12.5	Chicken Production	72
3.12.5.1	Chicken Population.....	72
3.12.5.2	Chicken Population Trend.....	72
3.12.5.3	Chicken Flock Size.....	72
3.12.6	Other Livestock	72
3.12.7	Pests and Parasites Incidences and Control	73
3.12.7.1	Deworming	73
3.12.8	Access to Livestock Services	73
3.12.8.1	Access to livestock extension Services	73
3.12.8.2	Access to Veterinary Clinic.....	76
3.12.8.3	Access to village watering points/dam.....	76
3.12.9	Animal Contribution to Crop Production.....	77
3.12.9.1	Use of Draft Power	77
3.12.9.2	Use of Farm Yard Manure.....	77
3.12.9.4	Use of Compost	77
3.12.10	Fish Farming.....	79
3.13	Poverty Indicators.....	79
3.13.1	Access to Infrastructure and Other Services	79

3.13.2	Type of Toilets.....	80
3.13.3	Household's assets.....	80
3.13.4	Sources of Light Energy.....	82
3.13.5	Sources of Energy for Cooking.....	82
3.13.6	Roofing Materials.....	82
3.13.7	Access to Drink Water.....	84
3.13.8	Food Consumption Pattern.....	84
3.13.8.1	Number of Meals per Day.....	84
3.13.8.2	Meat Consumption Frequencies.....	85
3.13.8.3	Fish Consumption Frequencies.....	85
3.13.9	Food Security.....	85
3.13.10	Main Source of Cash Income.....	88
PART IV: MANYARA PROFILES		90
4.1	Region Profile	90
4.2	District Profiles.....	90
4.2.1	Babati.....	90
4.2.2	Hanang.....	92
4.2.3	Mbulu.....	94
4.2.4	Simanjiro.....	96
4.2.5	Kiteto.....	98

ACRONYMS

<i>ASDP</i>	<i>Agricultural Sector Development Project</i>
<i>CSPro</i>	<i>Census and Survey Processing Program</i>
<i>DFID</i>	<i>Department For International Development</i>
<i>DIAS</i>	<i>District Integrated Agricultural Survey</i>
<i>DS</i>	<i>District Supervisor</i>
<i>EAS</i>	<i>Expanded Agricultural Survey</i>
<i>EAs</i>	<i>Enumeration Areas</i>
<i>EU</i>	<i>European Union</i>
<i>FE</i>	<i>Field Enumerator</i>
<i>GDP</i>	<i>Gross Domestic Product</i>
<i>Ha</i>	<i>Hectares</i>
<i>IAS</i>	<i>Integrated Agricultural Survey</i>
<i>ICR</i>	<i>Intelligent Character Recognition</i>
<i>IEC</i>	<i>Information, Education and Communication</i>
<i>JICA</i>	<i>Japanese International Cooperation Agency</i>
<i>LRS</i>	<i>Long Rainy Season,</i>
<i>MAFS</i>	<i>Ministry of Agriculture and Food Security</i>
<i>MCM</i>	<i>Ministry of Co-operatives and Marketing</i>
<i>MWLD</i>	<i>Ministry of Water and Livestock Development</i>
<i>NBS</i>	<i>National Bureau of Statistics</i>
<i>NGO</i>	<i>Non Governmental Organization</i>
<i>NMS</i>	<i>National Master Sample</i>
<i>NSCA</i>	<i>National Sample Census of Agriculture</i>
<i>NSGRP</i>	<i>National Strategy for Growth and Reduction of Poverty</i>
<i>PORALG</i>	<i>President's Office, Regional Administration and Local Government</i>
<i>PPS</i>	<i>Probability Proportional to Size</i>
<i>PSU</i>	<i>Primary Sampling Unit</i>
<i>RAAS</i>	<i>Rapid Appraisal Agricultural Survey</i>
<i>RS</i>	<i>Regional Supervisor</i>
<i>RSM</i>	<i>Regional Statistical Manager</i>
<i>SAC</i>	<i>Scotts Agriculture Consultancy Ltd</i>
<i>SPSS</i>	<i>Statistical Package for Social Science</i>
<i>SRS</i>	<i>Short Rainy Season</i>
<i>TOT</i>	<i>Training of Trainers</i>
<i>ULG</i>	<i>Ultek Laurence Gould</i>
<i>UNDP</i>	<i>United Nations Development Programme</i>
<i>UNFAO</i>	<i>United Nations Food and Agriculture Organization</i>
<i>VPO</i>	<i>Vice President Office</i>

PREFACE

At the end of the 2002/03 Agriculture Year, the National Bureau of Statistics and the Office of the Chief Government Statistician in Zanzibar in collaboration with the Ministries of Agriculture and Food Security; Water and Livestock Development; Cooperatives and Marketing as well as the Presidents Office, Regional Administration and Local Government (PORALG) conducted the Agriculture Sample Census. This is the third Agriculture Census to be carried out in Tanzania, the first one was conducted in 1971/72, the second in 1993/94 and 1994/95 (during 1993/94 data on household characteristics and livestock count were collected and data on crop area and production in 1994/95).

It is considered that this census is one of the largest to be carried out in Africa and indeed in many other countries of the world. The census collected detailed data on crop production, crop marketing, crop storage, livestock production, fish farming, tree farming, access to infrastructures and services and poverty indicators.

In addition to this, the census was large in its coverage as it provides data that can be disaggregated at district level. The census covered smallholders in rural areas only and large scale farms. This report presents Manyara region data disaggregated to district level. It was very difficult to discuss all variables collected in a single report hence the analysis was based on the most important smallholder variables. The rest of the variables are found in the attached annex of table of results. The analysis has not been done in the report due to the fact that it is a new region.

The extensive nature of the census in relation to its scope and coverage is a result of the increasing demand for more detailed information to assist in the proper planning of this sector and in the administrative decentralization of planning to district level. It is hoped that this report will provide new insights for planners, policy makers, researchers and others involved in the agricultural sector in order to improve the prevailing conditions faced by crop producers and livestock keepers in the country.

On behalf of the Government of Tanzania, I wish to express my appreciation for the financial support provided by the development partners, in particular, the European Union as well as DFID, UNDP, Japanese Government, JICA and others who contributed through the pool fund mechanism.

Finally, my appreciation goes to all those who in one-way or the other contributed to the success of the survey. In particular, I would also like to mention the enormous effort made by the Planning Group composed of professionals from the Agriculture Statistics Department of the National Bureau of Statistics (NBS), the Office of the Chief Government Statistician in Zanzibar (OCGS) and the Statistics Unit of the Ministry of Agriculture and Food Security (MAFS) with technical assistance provided by Ultec Lawrence Gould (ULG), Scotts Agriculture Consultancy Ltd and the Food and Agriculture Organisation of the United Nations (FAO).

Additionally, I would like to extend my appreciation to all professional staff of the National Bureau of Statistics, the sector Ministries of Agriculture and PORALG, the Consultants as well as Regional and District Supervisors and field enumerators for their commendable work. Certainly without their dedication, the census would not have been such a success.

Albina A. Chuwa
The Director General
National Bureau of Statistics

EXECUTIVE SUMMARY

The executive summary highlights the main survey results obtained during the National Sample Census of Agriculture 2002/03. This report covers small-scale agriculture households in rural areas of Manyara region that were selected using statistical sampling techniques. The results in the report do not cover urban areas and large-scale farmers.

The highlights describe the important findings in relation to agricultural production, productivity, husbandry, access to resources, levels of involvement in agricultural related activities and poverty in Manyara region and indicators for one to get an overview, at regional level, of the rural agricultural households and their levels of involvement in agricultural related activities.

i) Household Characteristics

The number of agricultural households in Manyara region was 154,194 out of which 53,923 (35%) were involved in growing crops only, 3,776 (2.4%) rearing livestock only, 141 (0.1%) were pastoralist, and 96,354 (62.5%) were involved in crop production as well as livestock keeping. In summary, Manyara region had 150,278 households involved in crop production and 100,271 involved in livestock production.

Most of the agricultural households ranked annual crop farming as an activity that provided most of their cash income followed by livestock keeping/herding, off farm income, tree/forest resources, remittances and fishing/hunting and gathering.

The region had a literacy rate of 64 percent. The highest literacy rate was in Babati district (73%) followed by Mbulu district (70%) and Hanang district (68%). Kiteto and Simanjiro districts had the lowest literacy rates of 58 and 52 percent respectively. The literacy rate for the heads of households in the region was 61 percent.

The number of heads of agricultural households with formal education in Manyara region was 90,244 (58.5%), those without formal education were 63,950 (41.5%) and those with only adult education were (1.2%). The majority of heads of agricultural households (54.7%) had primary level education whereas only 1.3 percent had post primary education.

In Manyara region 46,407 (51%) households had one household member each involved in off-farm income generating activity, 32,014 (35%) households had two household members each involved in off-farm income generating activities and 12,581 (14%) households had more than two household members each involved in off-farm income generating activities.

ii) Crop Production

▪ Land Area

The total area of land available to smallholders was 387,420 ha. The regional average land area utilised for crop production per crop growing household was only 2.1 ha. This figure was higher than the national average of 2.0 hectares.

▪ Planted Area

The area planted with annual crops and vegetables was 265,260 hectares out of which 4,020 hectares (1.5%) were planted during short rainy season and 261,239 hectares (98.5%) during long rainy season.

An estimated area of 200,201 ha (76.64% of the total planted area with annual and vegetable crops) was planted with cereals, followed by 46,097 hectares (17.65%) of pulses, 13,097 ha (5.01%) of oil seeds, 1,344 ha (0.51%) of roots and tubers, 407 ha (0.18%) of fruits and vegetables and 30 ha (0.01%) of cash crops.

▪ **Maize**

Maize dominated the production of cereal crop in the region. The number of households growing maize in Manyara region during the long rainy season was 144,475, (98% of the total crop growing households in the region during the long rainy season). The total production of maize during the long rainy season was 144,945 tonnes from a planted area of 185,559 hectares resulting in a yield of 0.78 t/ha. Other crops in order of their importance (based on area planted) were beans, sunflower, sorghum, finger millets, wheat, paddy, groundnuts and cassava.

The average area planted with maize per maize growing household ranged from 0.7 hectares in Mbulu District to 2.8 hectares in Kiteto District. Kiteto district had the largest planted area of maize (69,186 ha) followed by Babati (35,491 ha), Hanang (35,232 ha), Simanjiro (22,831 ha) and Mbulu (22,818 ha).

▪ **Sorghum**

Sorghum is the second most important cereal crop in the region in terms of planted area. The number of households that grew sorghum in Manyara region during the long rainy season was 15,108. This represented 10 percent of the total crop growing households in Manyara region in the long rainy season.

▪ **Oil Seeds**

The total production of oil seeds was 7,031 tonnes. The most cultivated oil seed crop was sunflower. The production for this crop was 6,366 tonnes, which constituted 91 percent of the total oil seeds production, followed by groundnuts 562 tonnes (7%) and simsim 103 tonnes (2%). The production of the other fruit and vegetable crops was relatively small.

▪ **Permanent Crops**

The area of smallholders planted area with permanent crops was 33,683 hectares which is 11 percent of the area planted with annual crops in the region. The most important permanent crop was pigeon peas which had a planted area of 26,755 (79 percent of the total area planted with permanent crops) followed by bananas 4,949 ha (15%) and coffee 1,185 ha (4%).

▪ **Improved Seeds**

The planted area using improved seeds was 41,071 ha which represents 15 percent of the total planted area with the annual crops and vegetables. The percentage use of improved seed in the short rainy season was at 24.3 percent higher than the corresponding percentage use for the long rainy season (15.3%).

▪ **Use of Fertilizers**

The use of fertilizers on annual crops was very small with the application of fertilisers to a planted area of only 87,132 ha (33% of the total planted area in the region). The planted area without fertilizer for annual crops was 178,129 hectares representing 67 percent of the total planted area with annual crops. Of the planted area with fertiliser application, farm yard manure was applied to 82,194 ha which represented 31.0 percent of the total planted area. This was followed by compost

(3,939 ha, 1.5%). Inorganic fertilisers were used on a small area which represented only 0.4 percent of the area planted with fertilisers

▪ **Irrigation**

In Manyara region, the area of annual crops and vegetables under irrigation was 6,736 ha representing 2.5 percent of the total area planted. The area under irrigation during the short rainy season was 765 ha accounting for 11 percent of the total area under irrigation. Some crops, especially vegetables, were predominantly grown in the long rainy season of which 56 percent of the area planted with vegetables was irrigated, whilst 100 percent of the vegetables were irrigated in the short rainy season.

▪ **Crop Storage**

There were 123,200 crop growing households (82.0% of the total crop growing households) that reported storing various agricultural products in the region.

The most important stored crop was maize with 118,797 households storing 57,729 tonnes as of 1st January 2004. This was followed by beans and other pulses (58,728 households and 5,409 tonnes), sorghum (10,909 households and 1,684 tonnes) and paddy (2,543 households and 2,540 tonnes), wheat (2,000 household, 650 tonnes) and groundnuts (1,638 households, 145 tonnes). The rest of the crops were stored in very small amounts.

▪ **Crop Marketing**

The number of households that reported selling crop was 88,121 which represented 58.6 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Babati (81%) followed by Kiteto (55%), Hanang (52%), Mbulu (48%) and Simanjiro (23%).

▪ **Agricultural Credit**

In Manyara region, few agricultural households (264, 0.2%) accessed credit, out of which 114 (43%) were male-headed households and 150 (57%) were female headed households. In Babati district only female headed households got credit for agriculture purposes, whereas in Hanang district only male households accessed credit. In Kiteto and Mbulu districts both male and female headed households had no access agricultural credit.

▪ **Crop Extension Services**

The number of agricultural households that received crop extension was 38,712 (26% of total crop growing households in the region). Some districts have more access to extension services than others with Babati district having a relatively high proportion of households that received crop extension messages (30.5%), followed by Simanjiro (31.5%), Hanang (30.4%), Kiteto (19.8%) and Mbulu (13.9%).

▪ **Soil Erosion and Water Harvesting Facilities**

The number of agricultural households that reported the presence of soil erosion and water harvesting facilities on their farms was 23,486. This number represented 15 percent of total number of agricultural households in the region. The proportion of farmers with soil erosion control and water harvesting facilities was highest in Simanjiro district (7.6%) followed by Mbulu (6.4%), Babati (6.3%), Hanang (0.5%) and Kiteto (0.2%).

iii) Livestock and Poultry Production**▪ Cattle**

The total number of cattle in the region was 1,177,951. Cattle were the dominant livestock in the region followed by goats, sheep and pigs. The region had 7.0 percent of the total cattle population on the Tanzanian Mainland. The number of indigenous cattle was 1,163,051 head (98.7% of the total number of cattle in the region), 13,761 (1.2%) were dairy breeds and only 1,139 (0.1%) were beef breeds.

▪ Goats

The number of goat-rearing-households in the region was 80,558 (52% of all agricultural households) with a total of 991,152 goats giving an average of 12 head of goats per goat-rearing-households.

▪ Sheep

The number of sheep-rearing households was 53,914 (35% of all agricultural households) with a total of 439,314 sheep giving an average of 8 heads of sheep per sheep-rearing household.

▪ Pigs

The number of pig-rearing households in the region was 16,210 (11% of the total agricultural households) rearing about 41,236 pigs. This gave an average of 3 pigs per pig-rearing household.

▪ Chicken

The number of households keeping chickens was 90,103, raising 699,345 chickens. This gives an average of 8 chickens per chicken-rearing household. In terms of total number of chickens in the country Manyara ranked twentieth out of the 21 Mainland regions.

▪ Use of Draft Power

The region has 147,712 oxen that were used to cultivate 110,979 hectares of land. This represented only 6.6 percent of the total oxen found on the mainland. The largest area cultivated using oxen was found in Babati district (39,985 ha, 36% of the total area cultivated using oxen).

▪ Fish Farming

The number of households involved in fish farming was 153 (0.1 percent of the total agricultural households in the region). Mbulu was the leading district with 84 agricultural households involved in fish farming followed by Kiteto 69. Fish farming was not practiced in the remaining districts.

iv) Poverty Indicators**▪ Availability of Toilets**

It was estimated that 81.6 percent of all rural agricultural households used the traditional pit latrines, 0.9 percent used improved pit latrine and 0.7 percent had flush toilets. The remaining 0.2 percent of households had other unspecified types of toilets. Households with no toilet facilities represented 16.6 percent of the total agriculture households in the region.

- **Household Assets**

The radio was the most owned asset with 48.7% households owning it followed by bicycle (41.8%), iron (15.8%), wheelbarrow (4.7%), mobile phone (1.3%), vehicle (1.0%), television/video (0.7%), and landline phone (0.4%).

- **Source of Lighting Energy**

Wick lamp was the most common source of lighting energy in the region. About 72.8 percent of the total rural households used this source of energy followed by hurricane lamp (17.5%), firewood (4.9%), pressure lamp (3.9%), mains electricity (0.7%), solar (0.1%) and gas or biogas (0.6%).

- **Energy for Cooking**

The most prevalent source of energy for cooking was firewood, which was used by 96.7 percent of all rural agricultural households. The second most common source of energy for cooking was charcoal (2.5%). The rest of energy sources accounted for 0.79 percent. These were bottled gas (0.13%), crop residues (0.30%), mains electricity (0.28%), livestock dung (0.07%).

- **Roofing Materials**

The most used roofing material (for the main dwelling) was grass/leaves and it was used by 45.6 percent of the rural agricultural households. This was closely followed by iron sheets (32%). Other roofing materials were grass/mud (21.7%), tiles (0.7%) and concrete (0.1%).

- **Number of Meals per Day**

About 59.7 percent of the holders in the region took three meals per day, 38.7 percent took two meals, 1.1 percent took one meal and 0.5 percent took four meals.

- **Food Security**

In Manyara region, 56,362 households (36.6% of the total agricultural households in the region) said they rarely experienced problems in satisfying the household food requirement. However 7,343 (4.8%) said they sometimes experience problems, 14.4 often experienced problems and 7.2 percent always had problems in satisfying the household food requirement. About 37.1 percent of the agricultural households said they did not experience any food sufficiency problems

- **Main Source of Cash Income**

Selling of food crops was the main cash income earning activity reported by 35.2 percent of all rural agricultural households. The second main cash income earning activity was sales of livestock (17.4%) followed by other casual earnings (15.0%) and businesses (9.2%). Other income earning activities were cash crops (8.4%), sale of forest products (6.3%), wages and salaries (2.8%), remittances (1.9%) and livestock products (1.6%).

3.55	Number and Percent of Households eating Meat Once per Week by District	87
3.56	Number and Percent of Households eating Fish Once per Week by District.....	87
3.57	Number and percent of Households Reporting food insufficiency by District.....	89.

1. BACKGROUND INFORMATION

Information not readily available at the time of printing this report.

2. INTRODUCTION

This part of the report provides the technical and operational description of the National Sample Census of Agriculture (NSCA), carried out in the rural areas of Tanzania Mainland and Zanzibar during the 2002/03 agricultural year. It details the background and the rationale for carrying out the NSCA in 2002/03 agricultural year. It also explains the sampling procedures, designing and implementation of the data processing system.

2.1 The Rationale for Conducting the National Sample Census of Agriculture

In 2003, the Government of Tanzania launched the Agricultural Sample Census as an important part of the Poverty Monitoring Master Plan which supports the production of statistics for advocacy of effective public policy, including poverty reduction, access to services, gender, as well as the standard crop production data normally collected in an agriculture census. The census is intended to fill the information gap and support planning and policy formulation by high level decision making bodies. It is also meant to provide critical benchmark data for monitoring Agriculture Sector Development Programme (ASDP) and other agriculture and rural development programs as well as prioritising specific interventions of most agriculture and rural development programs.

Following the decentralisation of the Government's administration and planning functions, there has been a pressing need for agriculture and rural development data disaggregated at regional and district levels. The provision of district level estimates will provide essential baseline information on the state of agriculture and support decision making by the Local Government Authorities in the design of District Agricultural Development and Investment Projects (DADIPS). The increase in investment is an essential element in the national strategy for growth and reduction of poverty.

This report (Volume V) is among the 21 regional reports for the mainland. Other Census reports include the Technical Report (Volume I), crop sector at national and regional levels including Zanzibar estimates (Volume II), Livestock Report (Volume III), Smallholder Household Characteristics and Access to Natural Resources Report (Volume IV), 21 Regional Reports for the Mainland (Volume V), Large Scale Farms Report (Volume VI) and a separate report for Zanzibar (Volume VII). In order to address the specific issue of gender, a separate thematic report on gender has been published. Other thematic reports will be produced depending on the demand and availability of funds. In addition to these reports two dissemination applications have been produced to allow users to create their own tabulations, charts and maps.

The report is divided into five main sections: Background Information, Introduction, Results, Evaluation and Conclusion and Appendices. The definitions relating to all aspects of this report can be found in the questionnaire (Appendix III).

2.2 Census Objectives

The 2003 Agriculture Sample Census was designed to meet the data needs of a wide range of users down to district level including policy makers at local, regional and national levels, rural development agencies, funding institutions, researchers, Non government Organisations (NGOs), farmer organisations, etc. As a result, the dataset is both more numerous in its sample and detailed in its scope compared to previous censuses and surveys. To date this is the most detailed Agricultural Census carried out in Africa. The census was carried out in order to:

-
- Identify structural changes if any, in the size of farm household holdings, crop and livestock production, farm input and implement use. It also seeks to determine if there are any improvements in rural infrastructure and in the level of agriculture household living conditions;
 - Provide benchmark data on productivity, production and agricultural practices in relation to policies and interventions promoted by the Ministry of Agriculture and Food Security and other stake holders.
 - Establish baseline data for the measurement of the impact of high level objectives of the Agriculture Sector Development Programme (ASDP), National Strategy for Growth and Reduction of Poverty (NSGRP) and other rural development programs and projects.
 - Obtain benchmark data that will be used to address specific issues such as: food security, rural poverty, gender, agro-processing, marketing, service delivery, etc.

2.3 Census Coverage and Scope

The census was conducted for both large and small scale farms. The National Sample Census of Agriculture covered a total of 3,221 selected rural villages of Tanzania Mainland out of which 215 villages were from Manyara region.

The census covered agriculture in detail as well as many other aspects of rural development and was conducted using three types of questionnaires:

- Small scale farm questionnaire
- Community level questionnaire
- Large scale farm questionnaire

The small scale farm questionnaire was the main census instrument and it includes questions related to crop and livestock production and practices; population demographics; access to services, resources and infrastructure; issues on poverty, gender and subsistence versus profit making production units. The main sections covered are as follows:

- Identification (i.e. region, district, ward and village)
- Household and holding characteristics
- Household information
- Land ownership/tenure
- Land use
- Access and use of resources
- Crop and vegetable production
- Agro processing and by-Products
- Crop storage and marketing
- On-farm investment
- Access to farm inputs and implements
- Use of credit for agricultural purposes
- Tree farming/agro-forestry
- Crop extension services
- Livelihood constraints
- Animal contribution to crop production

-
- Livestock
 - Livestock products
 - Fish farming
 - Livestock extension
 - Labour use
 - Access to infrastructure and other services
 - Household facilities

The community level questionnaire was designed to collect village level data such as access and use of common resources, community tree plantation and seasonal farm gate prices.

The large scale farm questionnaire was administered to large scale farms that were either privately or corporately managed. There will be a national report on large scale farming on Tanzania Mainland.

2.4 Legal Authority of the National Sample Census of Agriculture

The NSCA 2002/03 was conducted under the legal authority of the 2000 National Bureau of Statistics Act which, among other things, makes data collected from individuals strictly confidential and to be used for statistical purposes only.

2.5 Reference Period

Two types of reference periods were used namely the agricultural year and the reference date for livestock enumeration. The agricultural year 2002/03 (that is October 2002 to September 2003) was used for the data items that are related to crop production. The reference date of enumeration for livestock and poultry count was 1st October 2003.

2.6 Census Methodology

The main focus at all stages of the census execution was on data quality and this is emphasised in this section. The main activities undertaken include:

- Census organisation
- Tabulation plan preparation
- Sample design
- Design of census questionnaires and other instruments.
- Field pretesting of the census instruments
- Training of trainers, supervisors and enumerators
- Information Education and Communication (IEC) campaign
- Data Collection
- Field supervision and consistency checks
- Data processing:
 - Scanning
 - ICR extraction of data
 - Structure formatting application
 - Batch validation application
 - Manual data entry application
 - Tabulation preparation using SPSS

- Table formatting and charts using Excel, map generation using ArcView and Freehand.
- Report preparation using Word and Excel.

2.6.1 Census Organization

The Census was conducted by the National Bureau of Statistics in collaboration with the sector ministries of agriculture, and the Office of the Chief Government Statistician in Zanzibar. At the national level the Census was headed by the Director General of the National Bureau of Statistics with assistance from the Director of Economic Statistics. The Planning Group, made up of staff from the National Bureau of Statistics, Department of Agricultural Statistics and three representatives from the Ministry of Agriculture and Food Security (Department of Policy and Planning), oversaw the overall operational aspects of the Census. At the regional level, implementation of census activities was overseen by the Regional Statistical Officer of NBS and the Regional Agriculture Supervisor from the Ministry of Agriculture and Food Security. At the District level, two supervisors from the President's Office, Regional Administration and Local Government (PORALG), managed the enumerators who also came from the same ministry.

Members of the Planning Group had a minimum qualification of a bachelor degree, the regional supervisors were either agricultural economists, statisticians or statistical officers. The district supervisors and enumerators had diploma level qualifications in agriculture.

The Census and Surveys Technical Working Group provided support in sourcing financing, approving budget allocations and technical assistance inputs as well as monitoring the progress of the census. A Technical Committee for the census was established with members from key stakeholder organisations (i.e. NBS, sector ministries of agriculture, President's Office, Planning and Privatization (POPP), PORALG, University of Dar es Salaam (UDSM), Tanzania Food and Nutrition Centre (TFNC) and the Office of Chief Government Statistician (OCGS) in Zanzibar). The main function of the committee was to approve the proposed instruments and procedures developed by the Planning Group. It also approved the tabulations and analytical reports prepared from the Census data.

2.6.2 Tabulation Plan

The tabulation plan was developed following three user group workshops and thus reflects the information needs of the end users. It took into consideration the tabulations from previous census and surveys to allow trend analysis and comparisons.

2.6.3 Sample Design

The Mainland sample consisted of 3,221 villages. These villages were drawn from the National Master Sample (NMS) developed by the National Bureau of Statistics (NBS) to serve as a national framework for the conduct of household based surveys in the country. The National Master Sample was developed from the 2002 Population and Housing Census. In most cases, within each selected village, data was collected from a sub-sample of fifteen agricultural households. In few large villages thirty households were selected. The total Mainland sample was 48,315 agricultural households. In Zanzibar a total of 317 EAs were selected and 4,755 agricultural households were covered. Nationwide, all regions and districts were sampled with the exception of three urban districts (two from Mainland and one from Zanzibar).

In both Mainland and Zanzibar a stratified two stage sample was used. In the first stage, villages/enumeration areas (EAs) were selected with probability proportional to the number of villages in each district.

Table 2.1: Census Sample Size

Number of	Mainland	Zanzibar	Total
Households	48,315	4,755	53,070
Villages/Eas	3,221	317	3,539
Districts	117	9	126
Regions	21	5	26

In the second stage, 15 households were selected from a list of farming households in each Village/EA using systematic random sampling. Table 2.1 gives the sample size of households, villages and districts for Tanzania Mainland and Zanzibar.

2.6.4 Questionnaire Design and Other Census Instruments

The census questionnaires were designed following user/producer meetings to ensure that the information collected was in line with their data needs. Several features were incorporated into the design of the questionnaire to increase the accuracy of the data:

- Where feasible all variables were extensively coded to reduce post enumeration coding error.
- The definitions for each section were printed on the opposite page so that the enumerator could easily refer to the instructions whilst interviewing the farmer.
- The responses to all questions were placed in boxes printed on the questionnaire, with one box per character. This feature made it possible to use scanning and ICR technologies for data entry.
- Skip patterns were used to avoid asking unnecessary questions
- Each section was clearly numbered, which facilitated the use of skip patterns and provided a reference for data type coding for the programming of CSPro, SPSS and the dissemination applications.

Besides the questionnaires, there were other instruments used:

- Village listing forms that were used for listing households in the villages and from these list a systematic sample of 15 agricultural households were selected from each village.
- Training manual which was used by the trainers for the cascade/pyramid training of supervisors and enumerators. This manual was trainers guiding document on the procedures to follow during the training
- Enumerator Instruction Manual which was used as reference material.

2.6.5 Field Pre-Testing of the Census Instruments

The Questionnaire was pre-tested in five locations (Arusha, Dodoma, Tanga, Unguja and Pemba). This was done purposely to test the wording, flow and relevance of the questions and to finalise crop lists, questionnaire coding and manuals. In addition to this, several data collection methodologies had to be finalised, namely, livestock numbers in pastoralist communities, cut flower production, mixed cropping, use of percentages in the questionnaire and finalising skip patterns and documenting consistency checks.

2.6.6 Training of Trainers, Supervisors and Enumerators

Cascade/pyramid training techniques were employed to maintain statistical standards. The top level training was provided to 66 national and regional supervisors (3 per region plus Zanzibar). The trainers were members of the Planning Group and the trainees were from the National Bureau of Statistics and the sector ministries of agriculture. The second level training was for the district supervisors and enumerators. This training was conducted in the regions. In each region three training sessions were conducted for the district supervisors and enumerators. In addition to training in field level Census methodology and definitions, emphasis was placed on training the enumerators and supervisors in consistency checking. Tests were given to the enumerators and supervisors and the best 50 percent of the trainees were selected to administer the smallholder and community level questionnaires. This increased the number of interviews per enumerator but it also released finance to increase the number of supervisors and hence the Supervisor Enumerator Ratio. The household listing exercise was carried out by all trained enumerators.

2.6.7 Information, Education and Communication (IEC) Campaign

Information, Education and Communication (IEC) is an important aspect of any census/survey undertaking. This is due to the fact that inadequately informed and hence uncooperative citizens may jeopardize the entire census/survey. As far as the 2002/03 Agricultural Sample Census was concerned, the main objective of the IEC program was to sensitize and mobilize Tanzanians to support, cooperate and participate in the census exercise.

Radio, television, newspapers, leaflets, t-shirts and caps were used to publicise the Sample Census. T-shirts and caps were used by the field staff and the village chairmen as official uniforms during the field work. The village chairmen helped to locate the selected households.

2.6.8 Household Listing

The household listing exercise was done in seven days. During the listing exercise, forms ACLF1 and ACLF2 were administered. The information collected included the number of fields operated by the household, the number of different types of livestock and poultry. This information was used to determine the agricultural households. From the list of agricultural households, 15 households were selected for the interview. The selection was done using the Random Number Table.

2.6.9 Data Collection

Data collection activities for the 2002/2003 Agricultural Sample Census took three months from January to March 2004. The data collection methods used during the census were by interview and no physical measurements, e.g., crop cutting and field area measurement were taken. Field work was monitored by a hierarchical system of supervisors at the top of which was the Mobile Response Team followed by the national, regional, and district supervisors.

The Mobile Response Team consisted of three principal supervisors who provided overall direction to the field operation and responded to queries arising outside the scope of the training exercise. The mobile response team consisted of the Manager of Agriculture Statistics Department, Long-term Consultant and Desk Officer for the Census. Decisions made on definitions and procedures were then communicated back to all enumerators via the national, regional and district supervisors.

District supervision and enumeration were done by staff from the President's Office, Regional Administration and Local Government (PORALG). National and regional supervisions were provided by senior staff of the National Bureau of Statistics and the sector ministries of agriculture. During the household listing exercise 3,221 extension staff were used. For the enumeration of the small holder questionnaire, 1,611 enumerators were used and additional 5 percent enumerators were held in reserve in case of drop outs during the enumeration exercise.

2.6.10 Field Supervision and Consistency Checks

Enumerators were trained to probe the respondents until they were satisfied with the responses given before they recorded them in the questionnaire. The first check of the questionnaires was done by enumerators in the field during enumeration. The second check was done by the district supervisors followed by regional and national supervisors. Supervisory visits at all levels of supervision focused on consistency checking of the questionnaires. Inconsistencies encountered were corrected, and where necessary a return visit to the respondent was made by the enumerator to obtain the correct

information. Further quality control checks were made through a major post enumeration checking exercise where all questionnaires were checked for consistencies by all supervisors in the district offices.

2.6.11 Data Processing

Data processing consisted of the following processes:

- Manual editing
- Data entry
- Data structure formatting
- Batch validation
- Tabulation
- Illustration production
- Report formatting

Manual Editing

Prior to scanning, all questionnaires underwent a manual cleaning exercise. This involved checking that the questionnaire had a full set of pages, correct identification and good handwriting. A score was given to each questionnaire based on the legibility and the completeness of enumeration. This score will be used to assess the quality of enumeration and supervision in order to select the best field staff for future censuses/surveys.

Data entry/Scanning and ICR extraction technologies

Scanning and ICR data capture technology was used for the small holder questionnaire. This not only increased the speed of data entry, it also increased the accuracy due to the reduction in keystroke errors. Interactive validation routines were incorporated into the ICR software to track errors during the verification process. The scanning operation was so successful that it is highly recommended that this technology be adopted for future censuses/surveys.

The Census and Surveys Processing Program (CSPro) was used to enter 2,880 of small holder questionnaires that were rejected by the Intelligent Character Recognition (ICR) extraction application.

Data structure formatting

A program was developed in visual basic to automatically alter the structure of the output from the scanning/extraction process in order to harmonise it with the manually entered data. The program automatically checked and changed the number of digits for each variable, the record type code, the number of questionnaires in the village, the consistency of the Village Identification (ID) code and saved the data of one village in a file named after the village code.

Batch validation

A batch validation program was developed in order to identify inconsistencies within a questionnaire. This is in addition to the interactive validation during the ICR extraction process. The procedures varied from simple range checking within each variable to more complex checking between variables. It took six months to screen, edit and validate the data from the smallholder questionnaire. After the long process of data cleaning, the results were prepared based on a pre-designed tabulation plan.

Tabulations

Statistical Package for Social Sciences (SPSS) was used to produce the Census results and Microsoft Excel was used to organize the tables and compute additional indicators.

Analysis and report preparation

The analysis in this report focuses on regional and district production estimates, districts comparisons and time series analysis. Microsoft Excel was used to produce charts; whereas Microsoft Word was used to compile the report.

Data quality

A great deal of emphasis was placed on data quality throughout the whole exercise from planning, questionnaire design, training, supervision, data entry, validation and cleaning/editing. As a result of this NBS believes that the Census is highly accurate and representative of what was experienced at field level during the Census year. With very few exceptions the variables in the questionnaire are within the norms for Tanzania and they follow expected time series trends when compared to historical data. Standard Errors and Coefficients of Variation for the main variables can be found in the Technical Report (Volume I).

2.7 Funding Arrangements

The Agricultural Sample Census was supported mainly by the European Union (EU) who financed most of the operational activities. Other funds for operational activities came from the Government of Tanzania, Government of Japan, United Nations Development Programme (UNDP) and other partners in the Pool Fund of the Vice President's Office (VPO). In addition to this, technical assistance was provided by the European Union (EU), Department for International Development (DFID) and Japanese International Cooperation Agency (JICA). Technical assistances were managed by Ultek Laurence Gould Consultants (ULG), Scotts Agriculture Consultancy Ltd (SAC) and the Food and Agriculture Organisation (FAO).

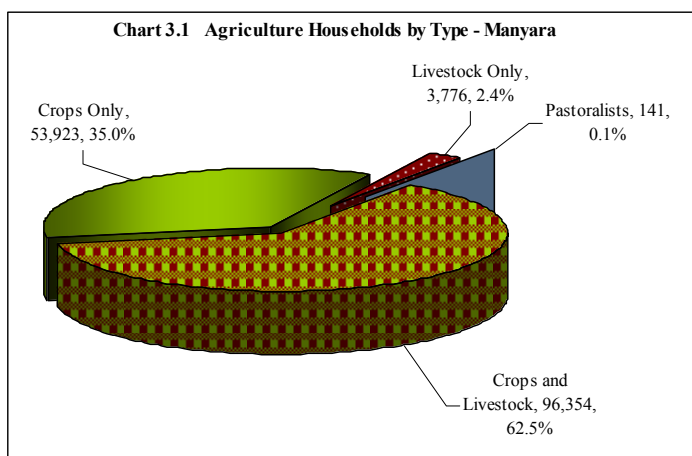
3. CENSUS RESULTS

This part of the report presents census results for Manyara region based on the data tables presented in Appendix AII. The results are presented in different forms including brief summaries, charts, condensed tables, graphs and maps in order to make it easy for the users to understand. Comparisons are made between related variables and between districts. Comparisons are also made with past censuses/surveys results such as the 1994/95 National Sample Census of Agriculture (NSCA), the 1995/96 and the 1996/97 Expanded Agricultural Surveys, the 1997/98 Integrated Agricultural Survey, the 1998/99 District Integrated Agricultural Survey and the 1999/00 Rapid Agricultural Appraisal Survey. The presentation of results is divided into four main sections which are household characteristics, crop results, livestock results and poverty indicators. Compared to previous censuses and surveys, more effort has been put in analyzing the results in order to formulate solid conclusions.

3.1 Household Characteristics

3.1.1 Type of Household

The number of agricultural households in Manyara region was 154,194. The largest number of agriculture households was in Babati (46,635), followed by Kiteto (34,381), Hanang (31,245), Simanjiro (25,569) and Mbulu (16,364) (Map 3.1). At district level, the highest density of households was found in Mbulu (196 per km²), followed by Hanang (135 per km²) (Map 3.2). Most households



(96,354 households, 62.5% of the total agricultural households in the region) were involved in crop production as well as livestock keeping, 53,923 households (35%) were involved in crop production only, 3,776 households (2.4%) were involved in rearing livestock only and 141 households (0.1%) were pastoralists (Chart 3.1) (Maps 3.3, 3.4, 3.5 and 3.6).

3.1.2 Livelihood Activities/Source of Income

The census results for Manyara region indicates that most of the agricultural households ranked annual crop farming as an activity that provided most of their cash income, followed by livestock keeping/herding, off - farm income, tree/forest resources, remittances, permanent crop farming and tree and fishing/hunting and gathering (Table 3.1).

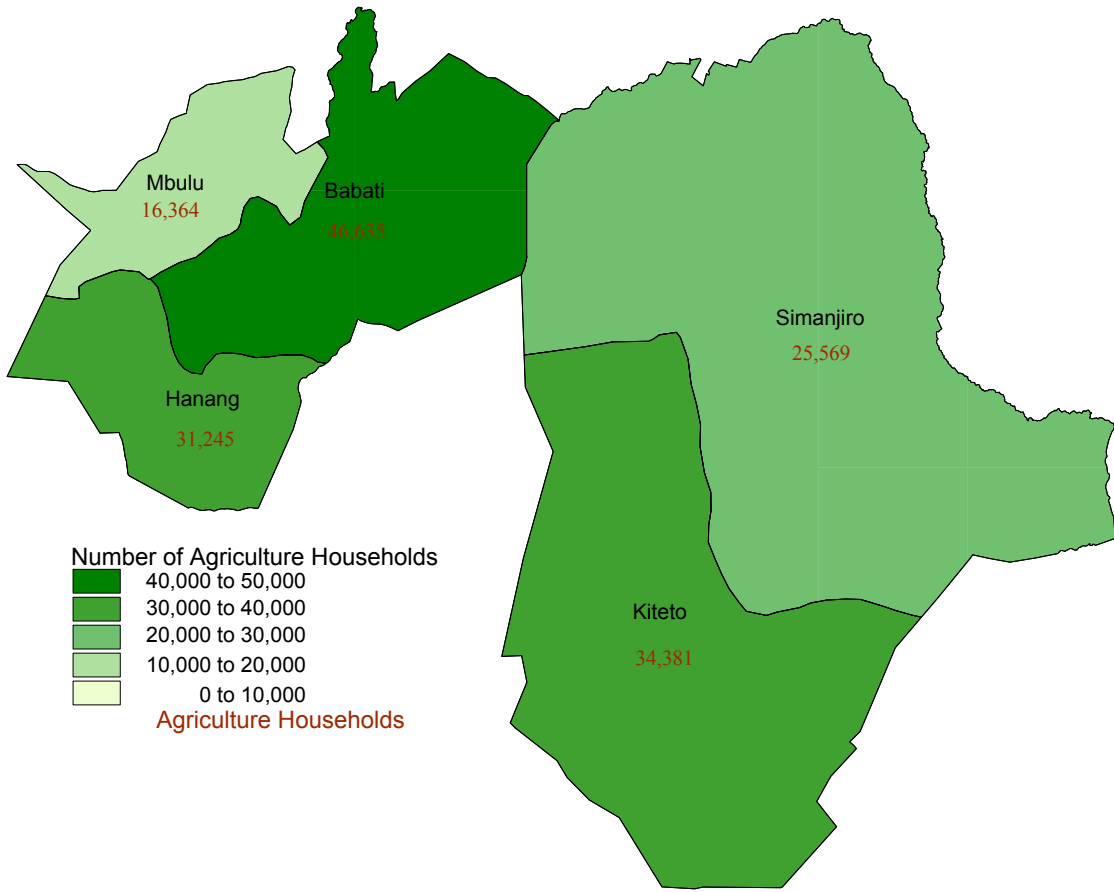
Table 3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District

District	Livelihood Activity						
	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	1	6	3	2	5	7	4
Hanang	1	6	2	3	5	7	4
Mbulu	1	5	2	4	6	7	3
Simanjiro	1	6	2	3	5	7	4
Kiteto	1	5	3	2	6	7	4
Total	1	6	2	3	5	7	4

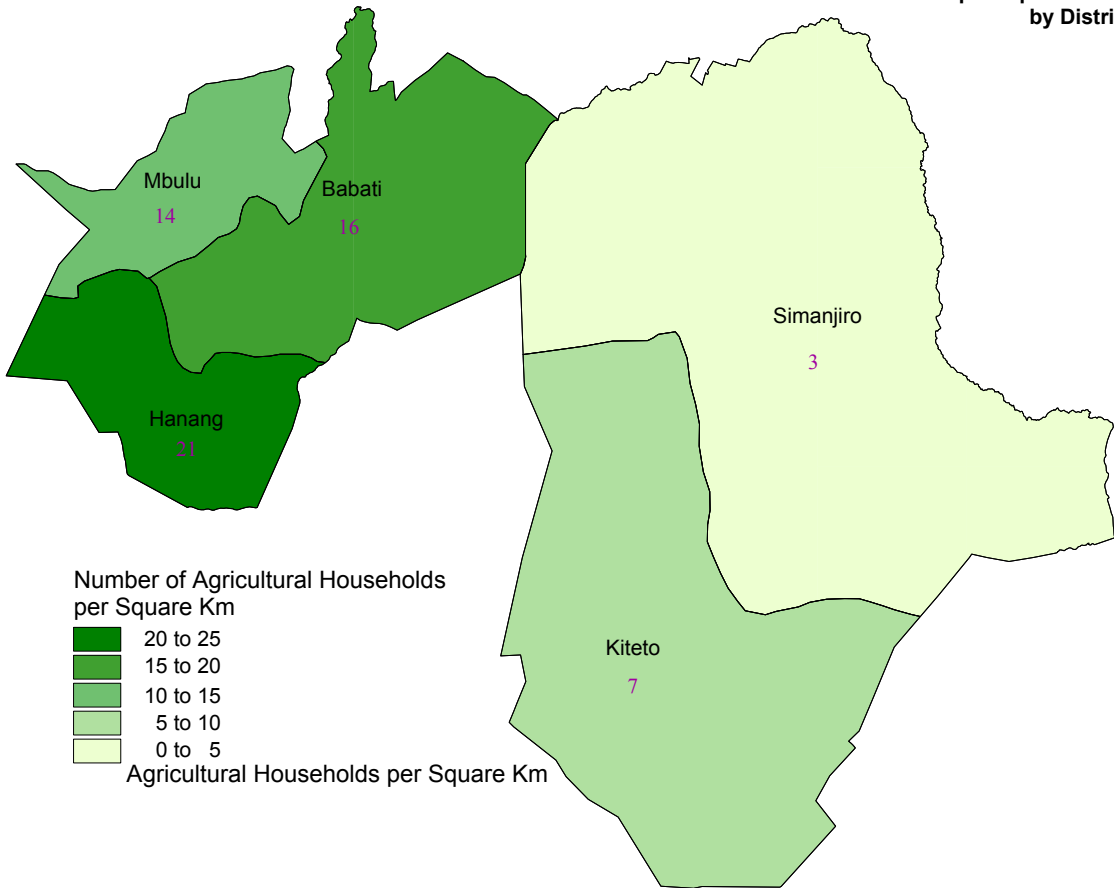
3.1.3 Sex and Age of Head of Households

The number of male-headed agricultural households in Manyara region was 134,268 (87% of the total regional agricultural households) whilst in female-headed households it was 19,926 (13% of the total regional agricultural households). The mean age of household heads was 45 years (45 years for male heads and 47 years for female heads) (Chart 3.2).

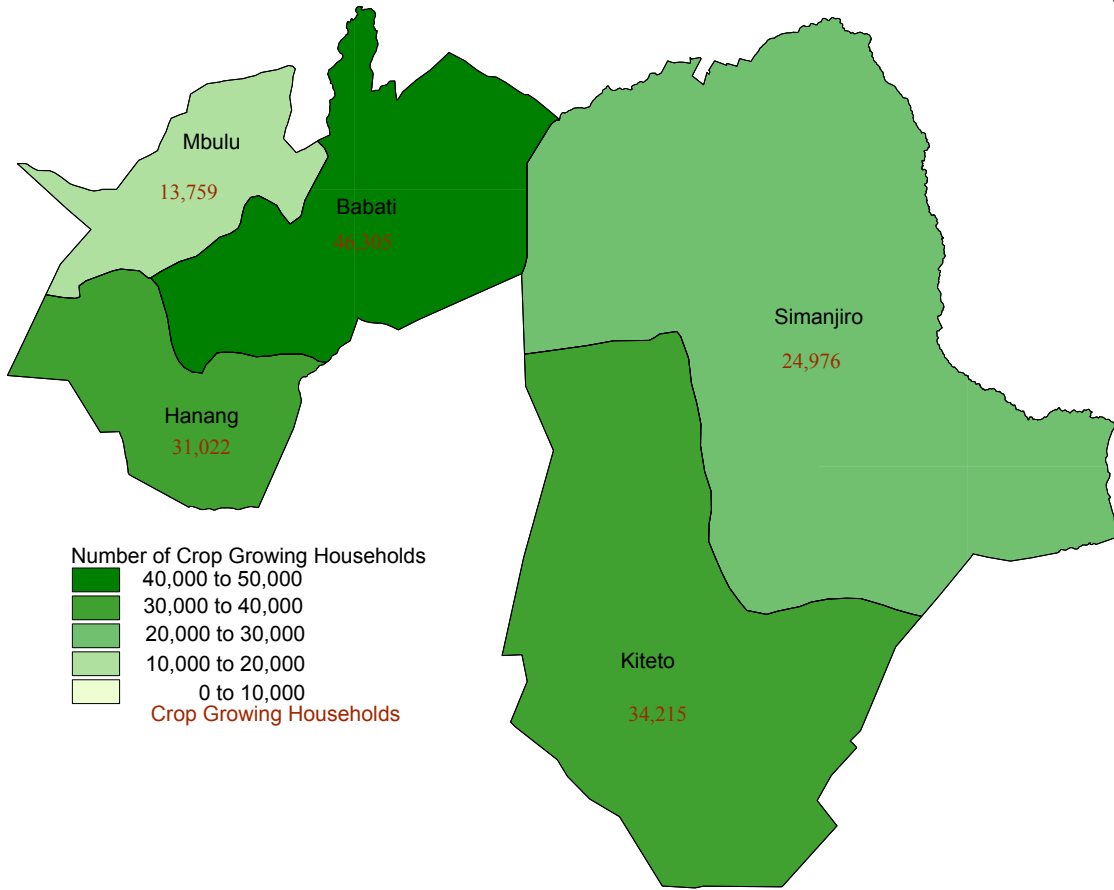
MAP 3.01 MANYARA
Total Number of Agricultural Households by District



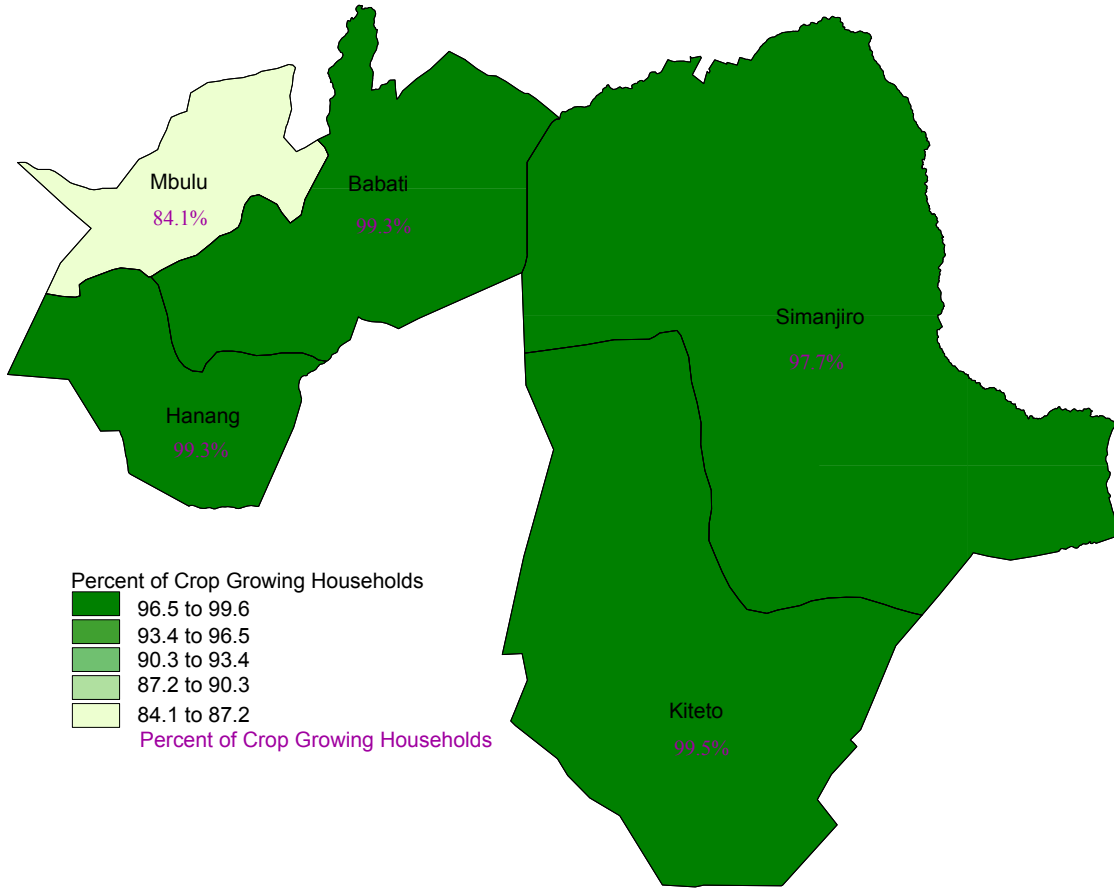
MAP 3.02 MANYARA
Number of Agricultural Households per Square Km of Land by District

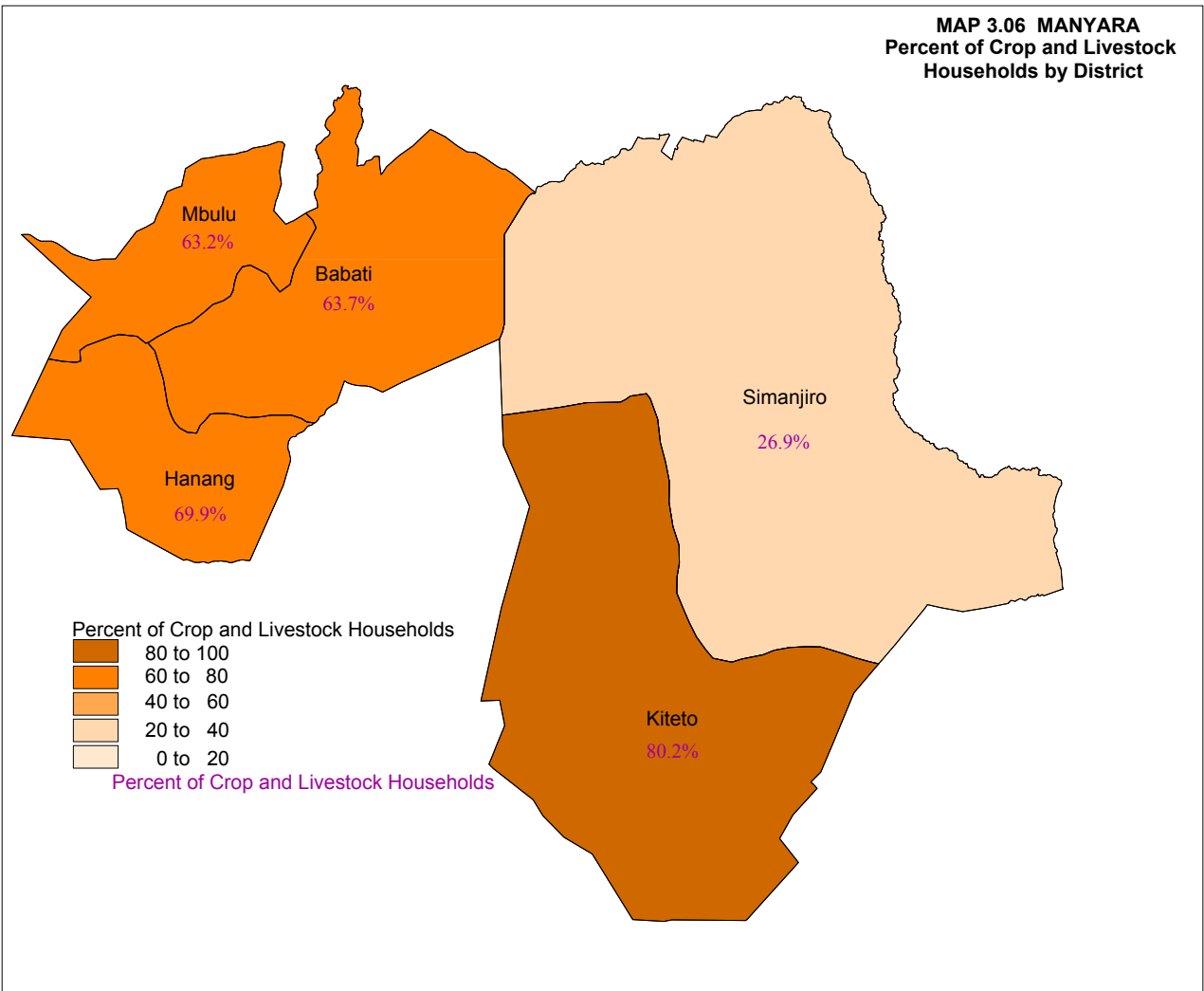
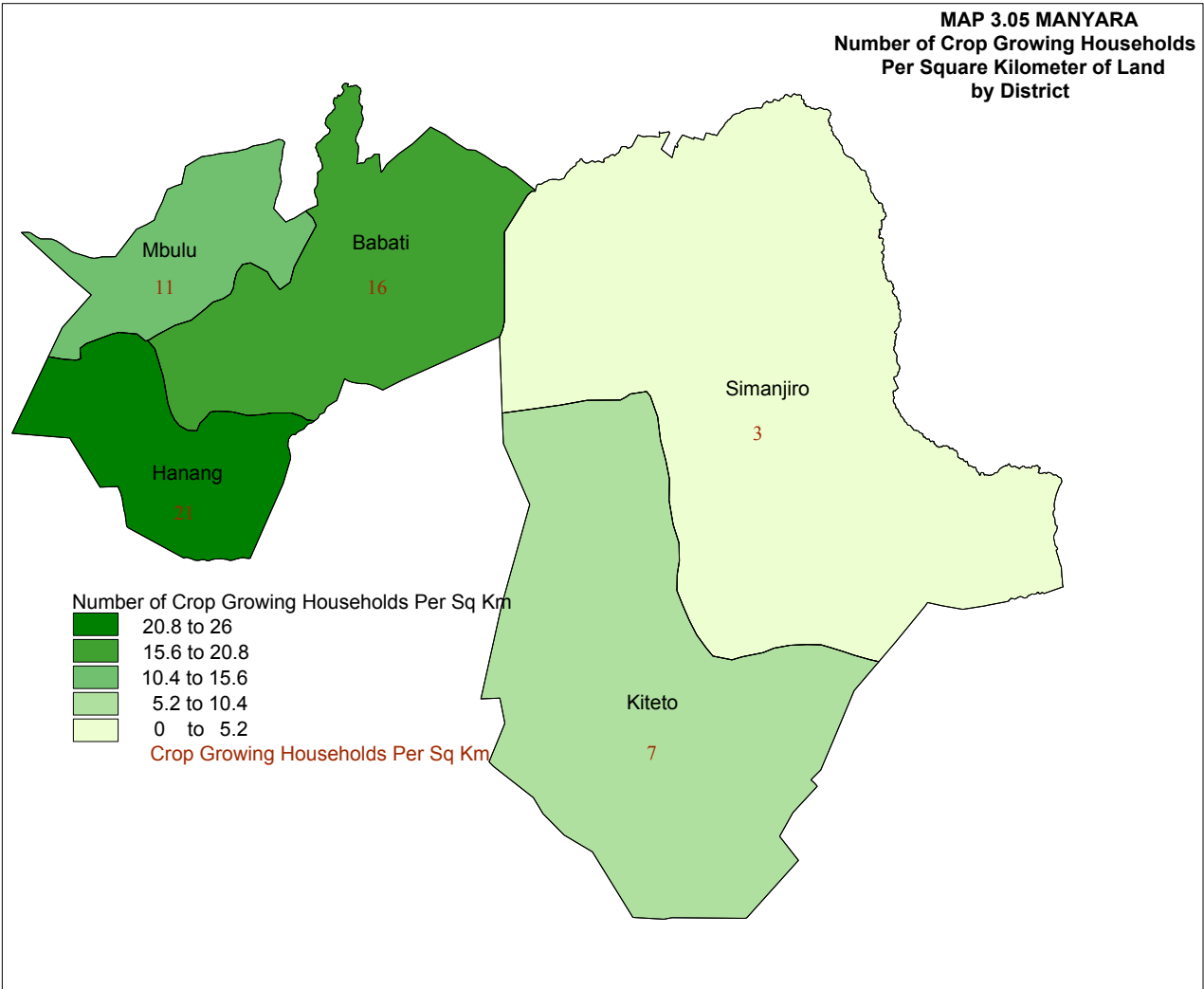


MAP 3.03 MANYARA
Number of Crop Growing
Households by District



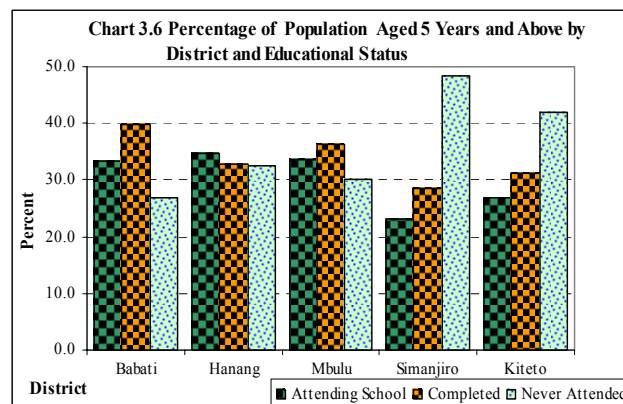
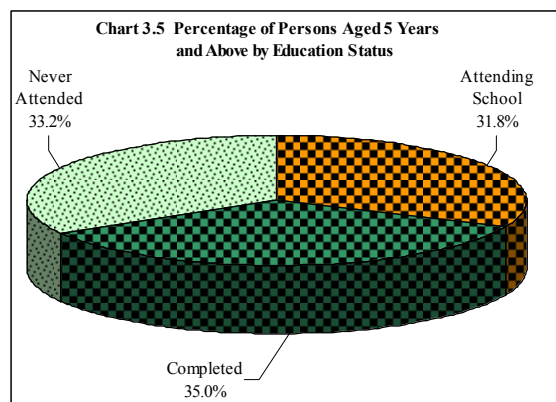
MAP 3.04 MANYARA
Percent of Crop Growing
Households by District





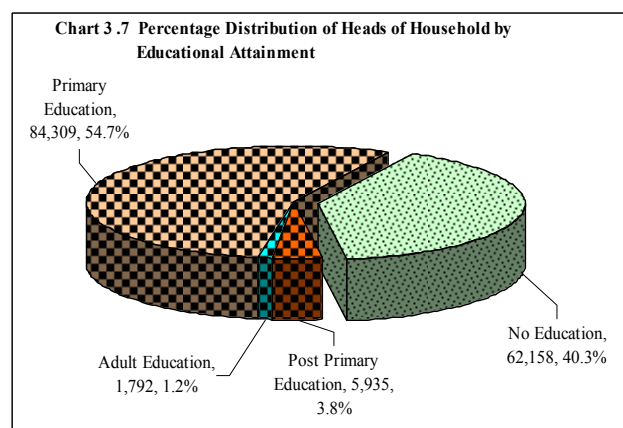
Educational Status

Information on educational status was collected from individual agricultural households. The results show that in the region, 35 percent of the population aged 5 years and above in agricultural households had completed different levels of education and 31.8 percent were still attending school. Those who have never attended school were 33.2 percent (Chart 3.5).



Agricultural households in Babati district had the highest percentage of population aged 5 years and above who had completed different levels of education (40%). This was followed by Mbulu district with 36 percent, Hanang (33%), Kiteto (31%) and Simanjiro (29%). Simanjiro district had the highest percent of households that have never attended school (48%) followed by Kiteto (42%) (Chart 3.6).

The number of heads of agricultural households with formal education in Manyara region was 90,244 (58.5%), those without formal education were 63,950 (41.5%). The majority of heads of agricultural households in Manyara region had primary level education (54.7%), whereas 40.3 percent had no education and only 3.8 percent of them had post primary education (Chart 3.7).



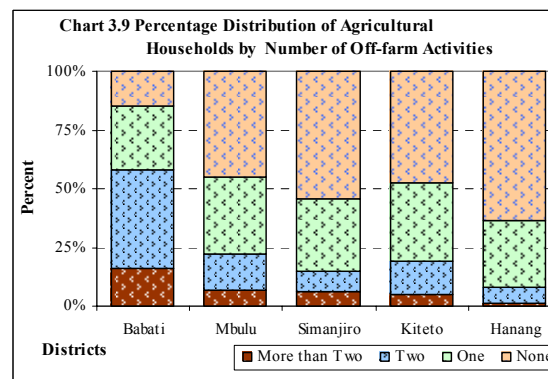
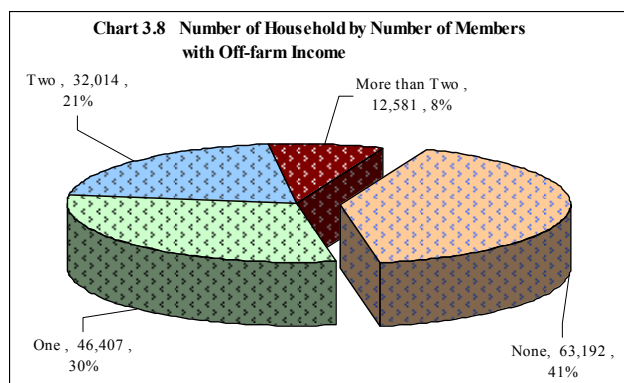
With regard to the heads of agricultural households with primary or secondary education in Manyara region, Babati district had the highest percentages (32% for primary and 36% for secondary). This was followed by Mbulu (23% for primary and 19% for secondary), Hanang (21% for primary and 15% for secondary), Kiteto (16% for primary and 17% for secondary) and Simanjiro (8% for primary and 14% for secondary).

3.1.6 Off-farm Income

Off-farm income refers to cash generated from non-agricultural activities. This can be either from permanent employment (i.e., government, private sector or other), temporary employment or labourers. It also includes cash generated from working on farms belonging to other farmers. Off-farm income was important amongst agriculture households in Manyara with 59 percent of households having at least one member with off-farm income. In the region, 46,407 households (51%)

had only one member aged 5 and above involved in off-farm income generating activity, 32,014 households (35%) had two members involved in off-farm income generating activities and 12,581 households (14%) had more than two members

involved in off-farm income generating activities. Households with no off-farm income in Mara region constitute 41percent of the total agricultural households in the region (Chart 3.8).



Babati district had the highest percentage of agriculture households with off-farm income (over 85% of total agriculture households in the district). Other districts with a high percent of agriculture household members with off-farm income were Mbulu (55%), Kiteto (53%) and Simanjiro (46%). Hanang district had the smallest percent of household members with off farm income (37%). The district with the highest percent of agriculture households with more than one member with off-farm income was Babati (58%). Hanang district had few households with more than one member having off-farm income (8%) (Chart 3.9).

3.2 Land Use

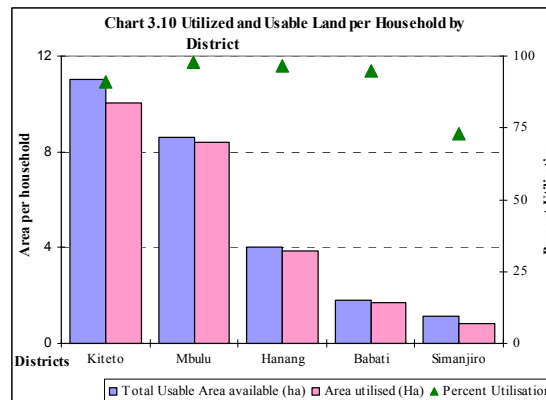
Land area and planted area are two different types of area measurements. Land area refers to the physical area of land and is the same regardless of the number of crops planted on the land in one year. Planted area is the total area of crops planted in a year and the area is summed if there were more than one crop on the same land per year. A number of terms are used in this section which requires defining for clarification as follows:

Land available refers to the area of land that has been allocated to smallholders through customary law, official title or other forms of ownership. Land available does NOT mean the total area of land that is designated as agriculture land in the country; but it is the land that is available to smallholders given the location of villages and lack of access to more remote parcels of unused agriculture designated land.

Usable land refers to the available land minus the land that cannot be used e.g., bare rocks, shallow soils, steep slopes, swamp areas, etc. It does however include un-cleared bush. Utilised land refers to the land that was used during the year.

3.2.1 Area of Land Utilised

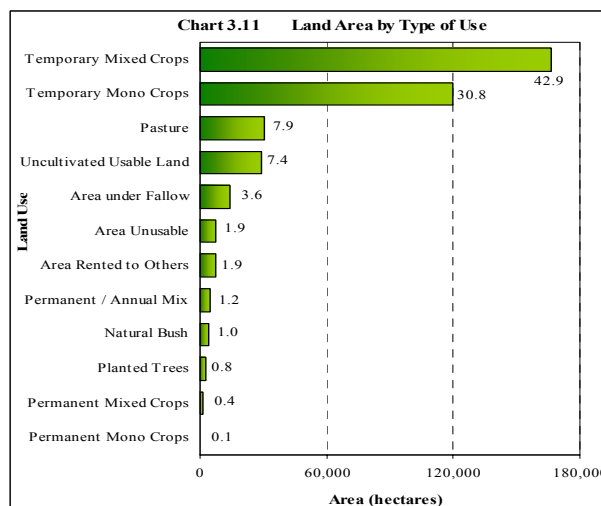
The total area of land available to smallholders was 387,420 ha. The regional average land area utilised for agriculture per household was only 2.0 ha. This figure was slightly above the national average which was estimated at 2.0 hectares. Eighty four percent of the total land available to smallholders was utilised. Only 16 percent of usable land available to smallholders was not used (Chart 3.10).



Large differences in land area utilised per household existed between districts with Kiteto and Mbulu utilizing 10 and 8 ha per household, it was followed by Hanang (4 ha), Babati (2 ha) and Simanjiro (1 ha). The percentage utilized of the usable land per household is highest in Hanang (98%) and lowest in Babati (73%). Ninety one percent of the total land available to smallholders was utilised. Only 16 percent of usable land available to smallholders was not used (Chart 3.11 and Map 3.7).

3.2.2 Types of Land Use

The area of land under temporary mixed crop was 166,314 hectares (42.9% of the total land available to smallholders in Manyara), followed by temporary mono crops (119,503 ha, 30.8 %), pasture (30,547 ha, 7.9%), uncultivable usable land (28,815 ha, 7.4%), area under planted trees area (2,977 ha, 0.8 %), area under fallow (13,919 ha, 3.6%), area unusable (7,785 ha, 1.9%), area rented to others (7,475 ha, 1.9%), area under permanent/annual mix (4,636 ha, 1.2%), area under natural bush (3,762 ha, 1.0%), area under permanent mixed crops (1,599 ha, 0.4%), and area planted with permanent mono crops (387

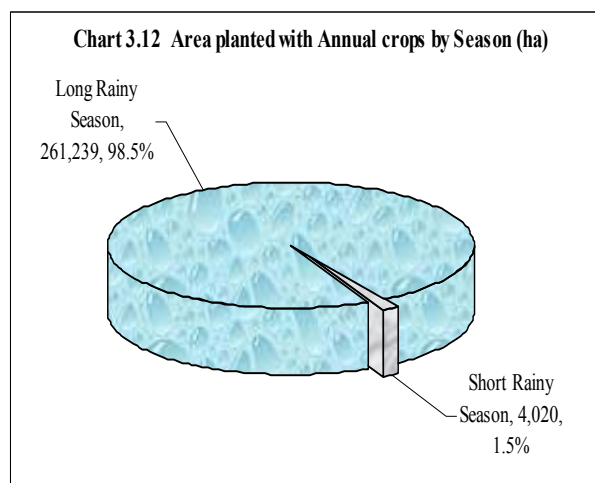


3.3 Annual Crop and Vegetable Production

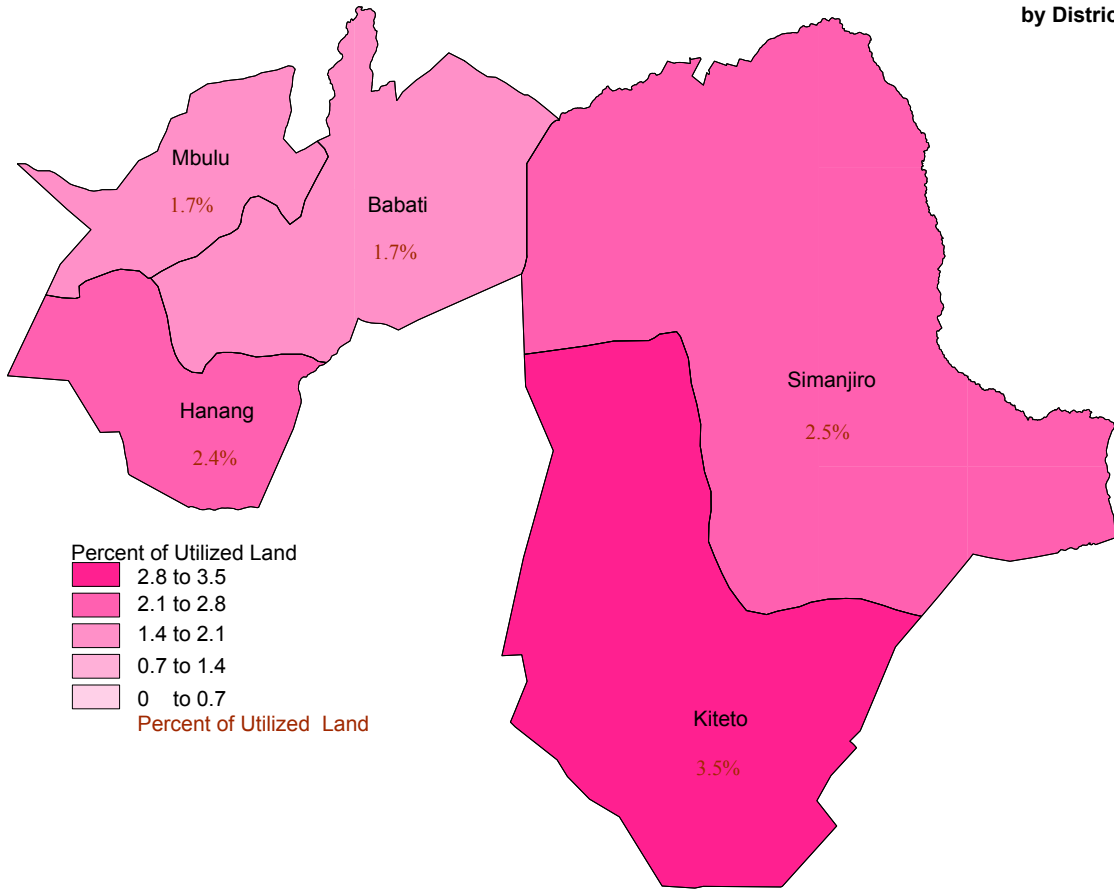
Manyara region has two rainy seasons, namely the short rainy season (October to November) and the long rainy season (April to May).

3.3.1 Area Planted

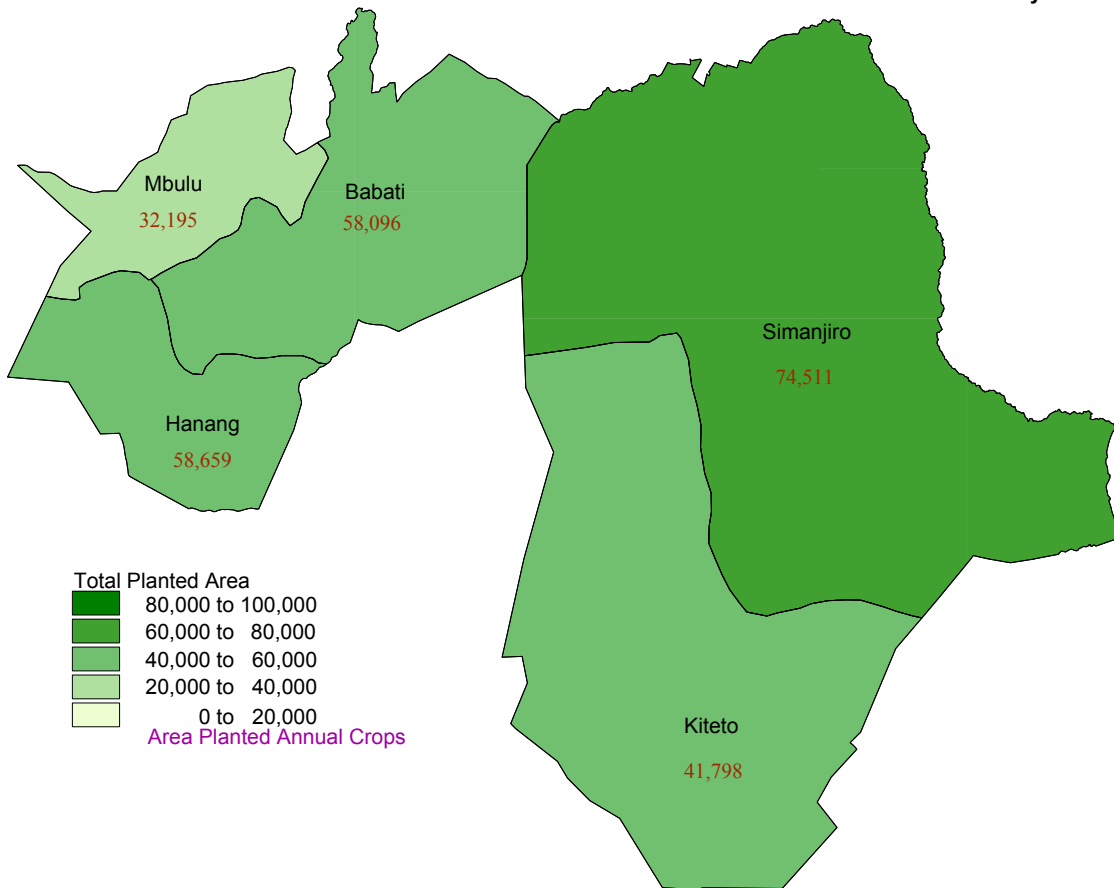
The area planted with annual crops and vegetables was 265,260 hectares out of which 4,020 hectares (1.5%) were planted during short rainy season and 261,239 hectares (98.5%) during long rainy season (Chart 3.12).

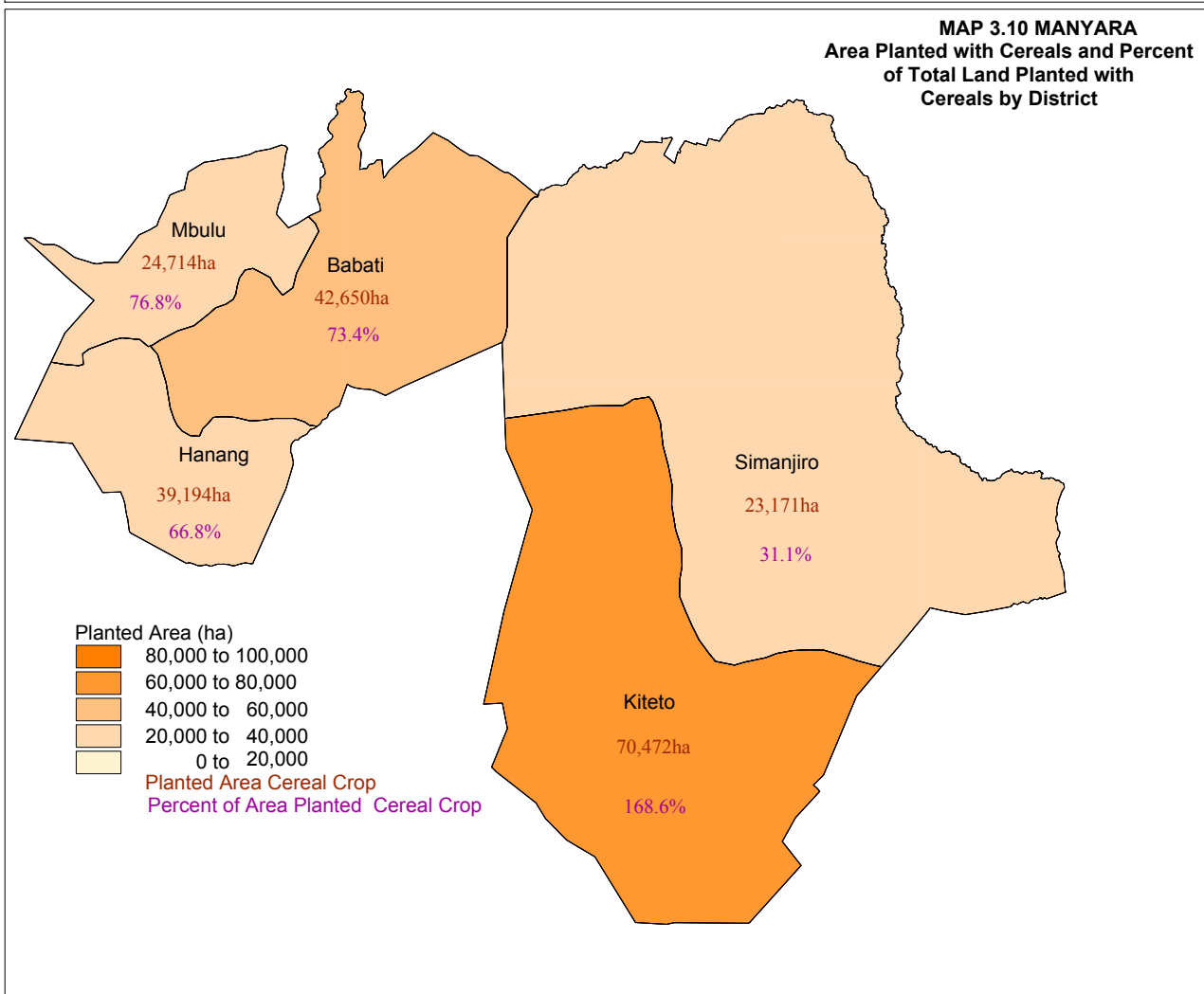
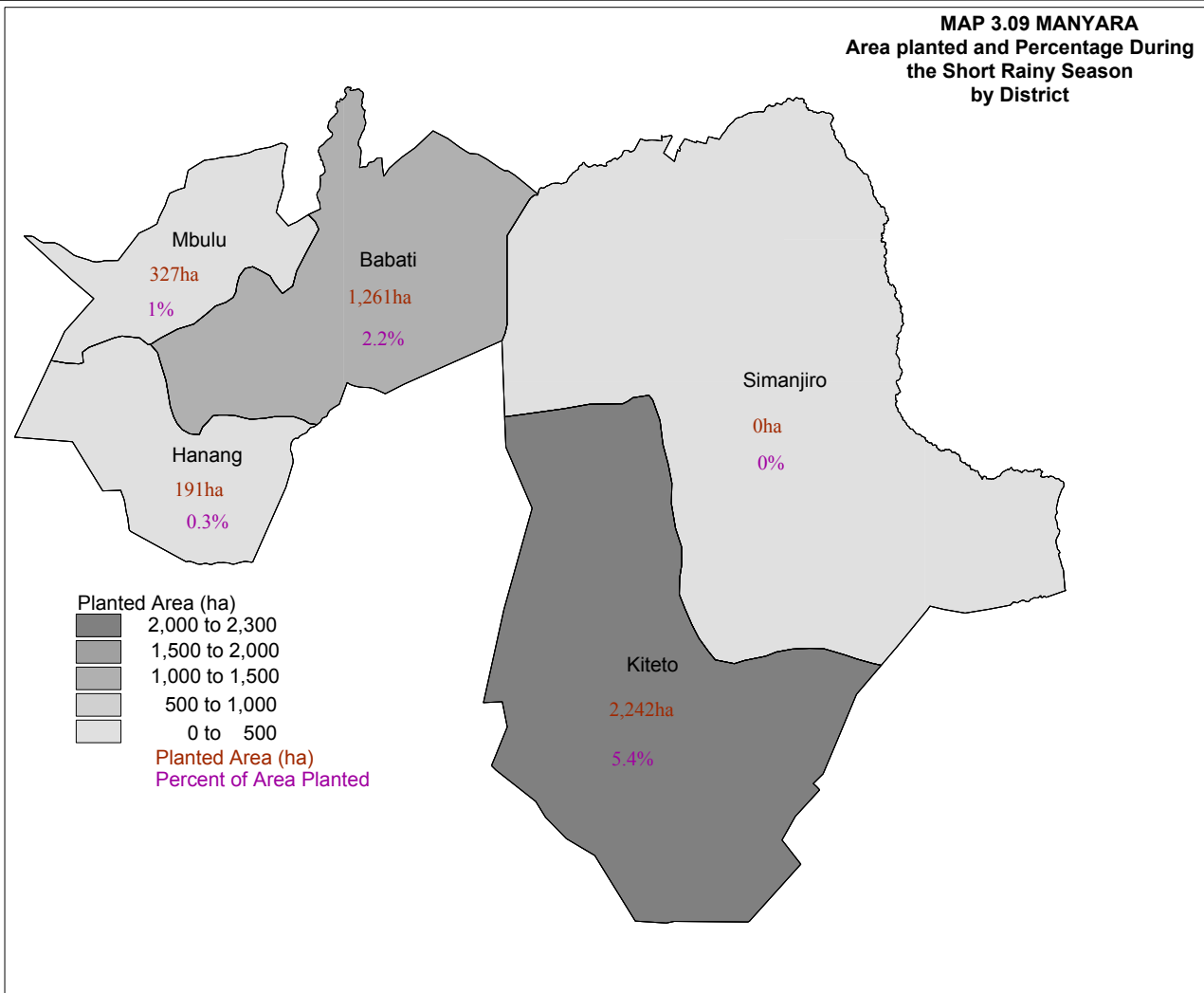


MAP 3.07 MANYARA
Utilized Land Area Expressed as a
Percent of Available Land
by District

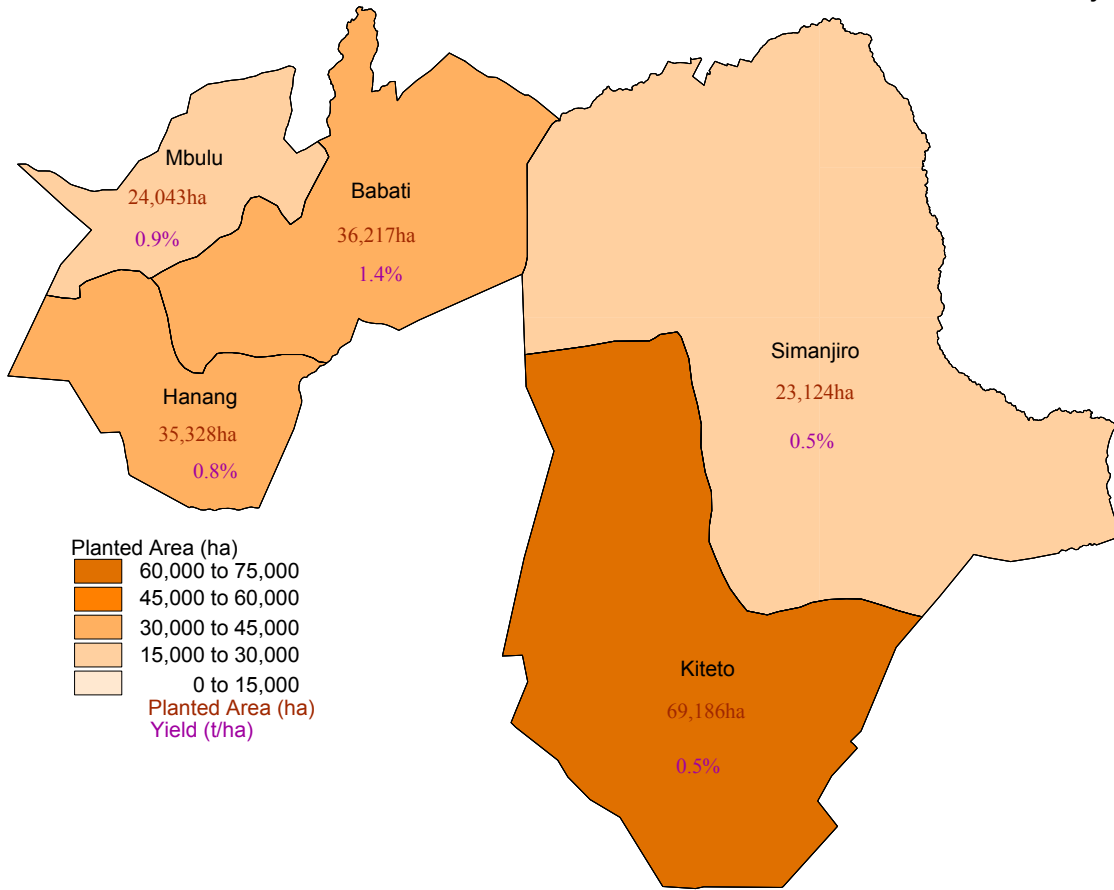


MAP 3.08 MANYARA
Total Planted Area (Annual Crops)
by District

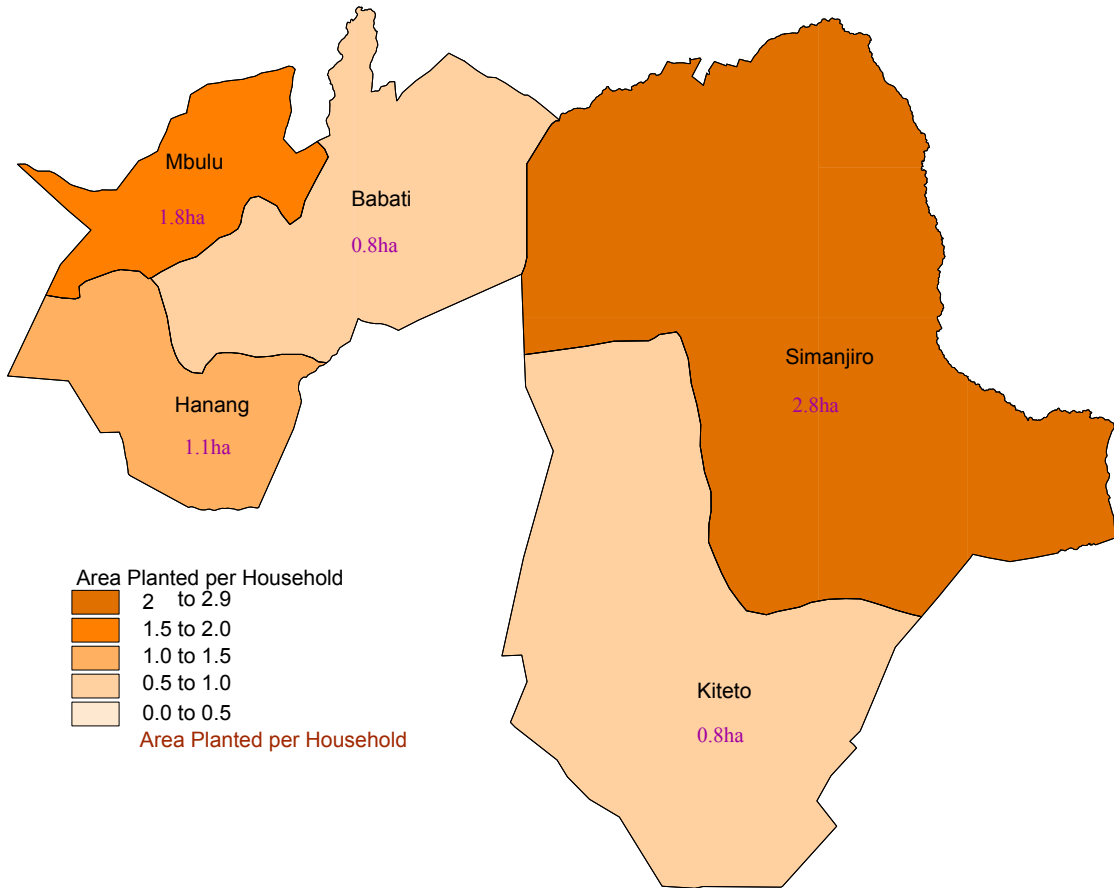




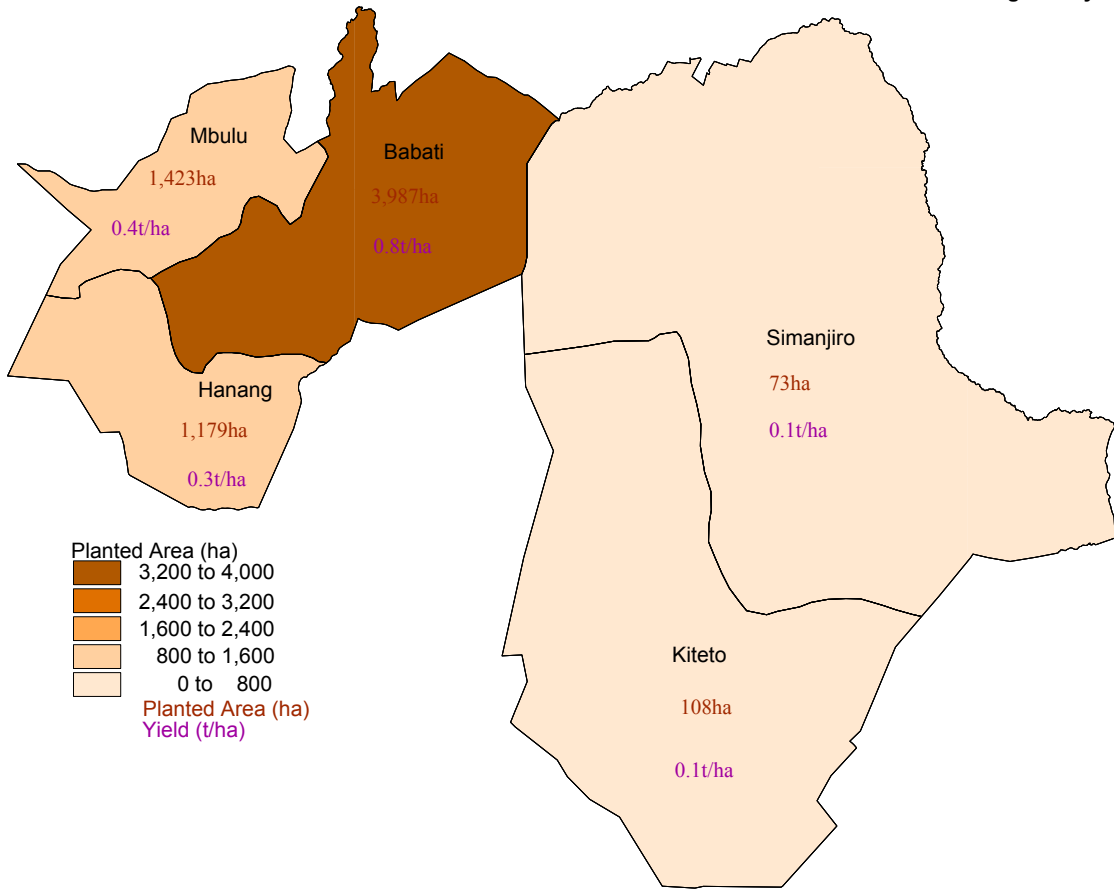
MAP 3.11 MANYARA
Planted Area and Yield of
Maize by District



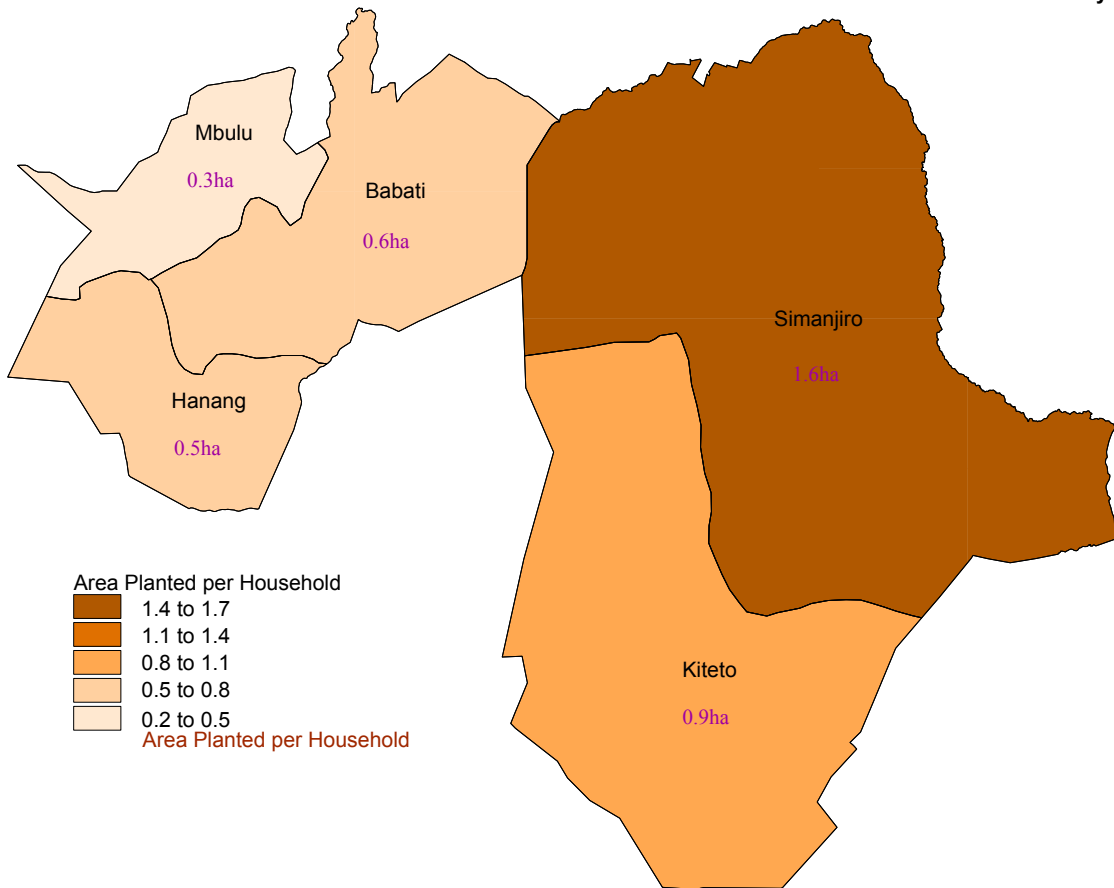
MAP 3.12 MANYARA
Area Planted per Maize Growing
Households by District



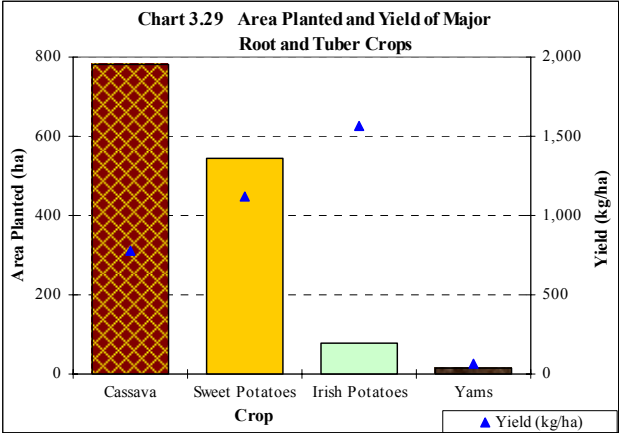
MAP 3.13 MANYARA
Planted Area and Yield of Sorghum by District



MAP 3.14 MANYARA
Area Planted per Sorghum Growing Households by District



The total production of roots and tubers was 1,341 tonnes. Cassava and sweet potatoes, each with a production of 609 tonnes, were the most important root and tuber crops in Manyara region. Each crop accounted for 45.4 percent of the total roots and tubers production, followed by Irish potatoes with 122 tonnes (9.1%) and yams (1 tonne, 0.1%).

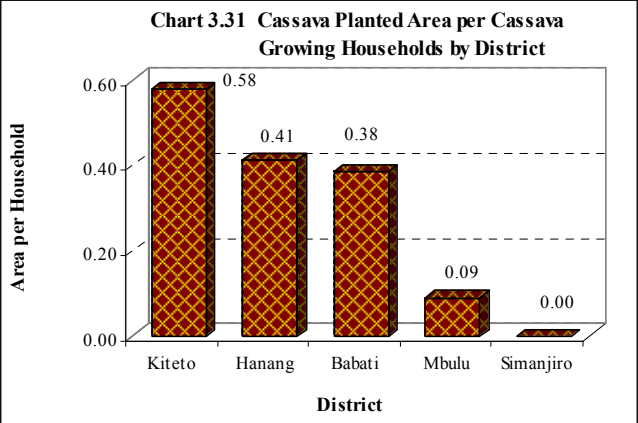
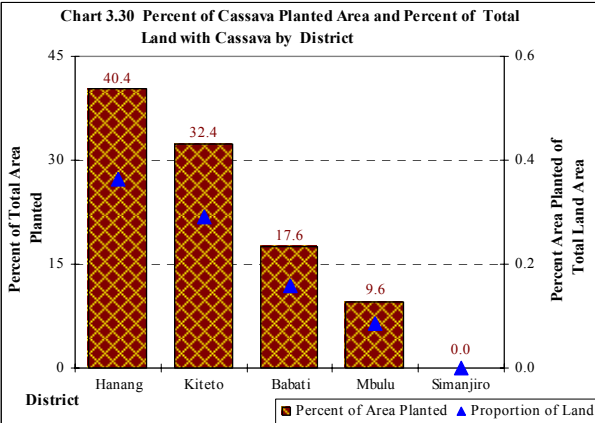


The yield of Irish potatoes was 1.6 t/ha, that of sweet potatoes was 1.1 t/ha, of cassava was 0.8 t/ha and that of yams was 0.07 t/ha (Chart 3.29).

3.3.5.1 Cassava

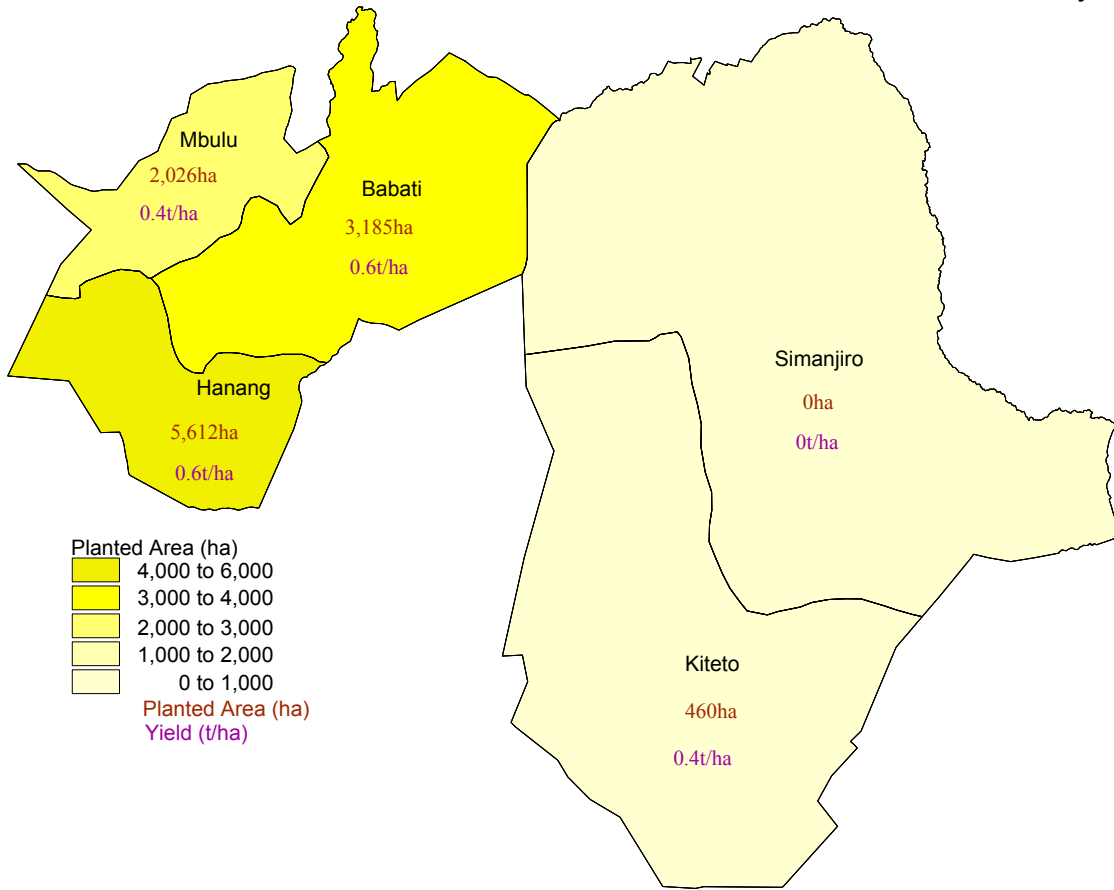
The number of households growing cassava in Manyara region in the long rainy season was 2,234. This represents 1.5 percent of the total crop growing households in the region. The total production of cassava during the census year was 609 tonnes from a planted area of 781 hectares resulting in a yield of 0.8 t/ha.

The area planted with cassava accounted for 0.3 percent of the total area planted with annual crops and vegetables in the census year. Hanang district had the largest planted area of cassava (316 ha, 40.4% of the cassava planted area in the region), followed by Kiteto (253 ha, 32.4%), Babati (137 ha, 17.6%) and Mbulu (75 ha, 9.6%) (Map 3.18). However, the highest proportion of land planted with cassava, expressed as a percent of the total land area was in Hanang district (0.4%). This was followed by Kiteto (0.3%), Babati (0.2%) and Mbulu (0.1%). Cassava was not cultivated in Simanjiro district (Chart 3.30).

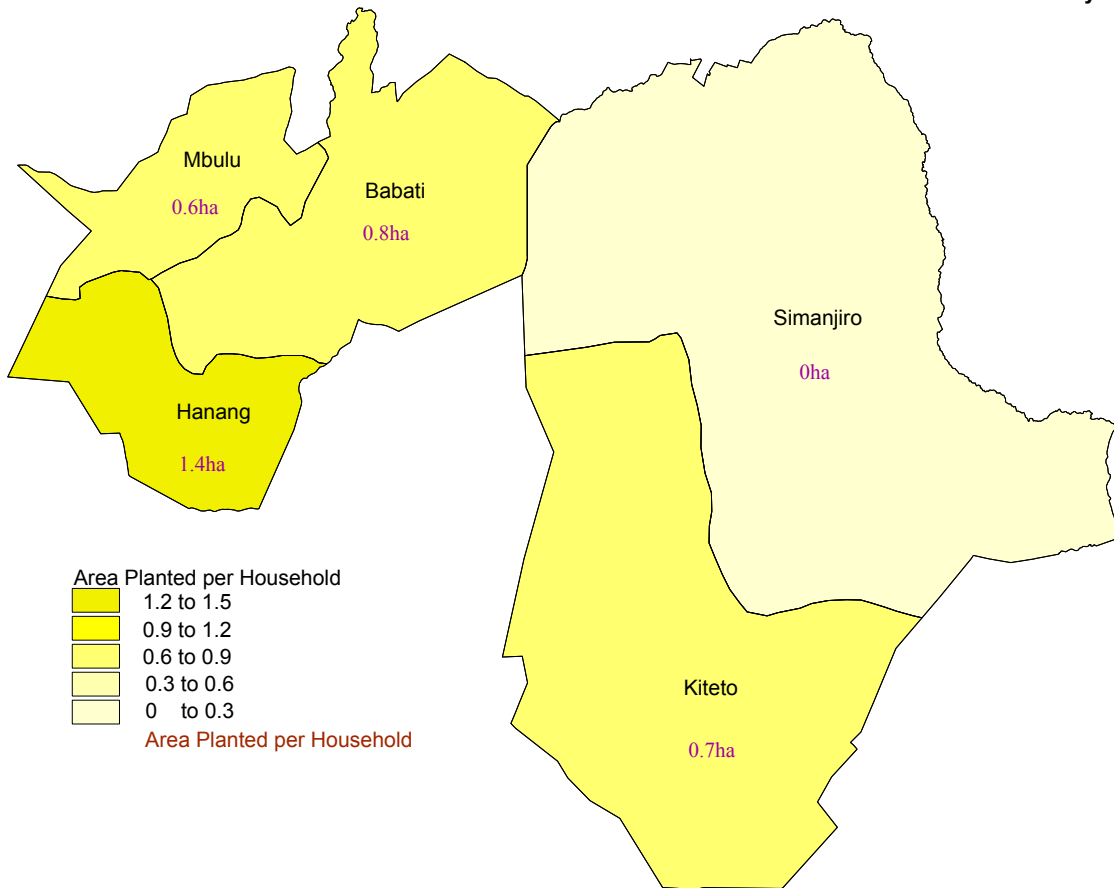


The average cassava planted area per cassava growing household was 0.34 hectares. However, there were small district variations. The area planted per cassava growing household was greatest in Kiteto (0.6 ha). This was followed by Hanang (0.41 ha), Babati (0.38 ha) and Mbulu (0.1 ha) (Chart 3.31 and Map 3.19).

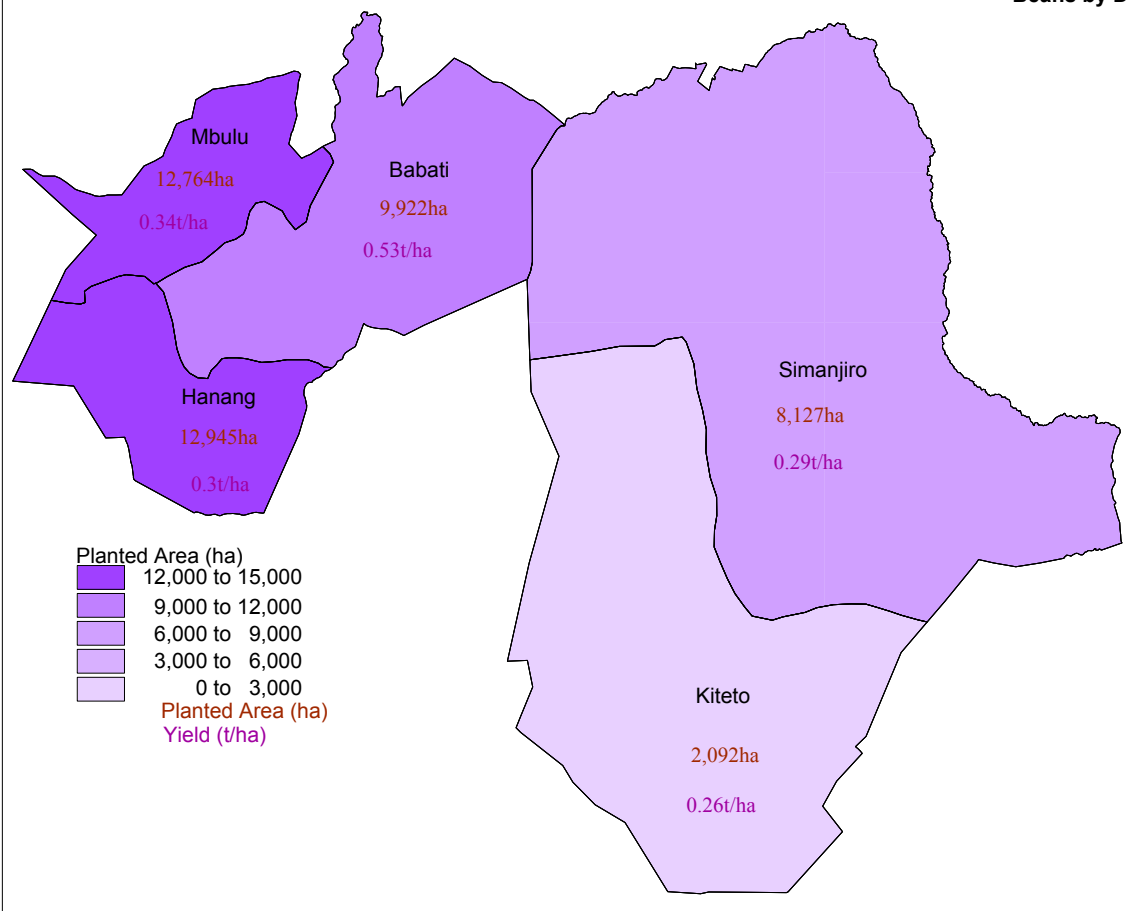
**MAP 3.15 MANYARA
Planted Area and Yield of
Sunflower by District**



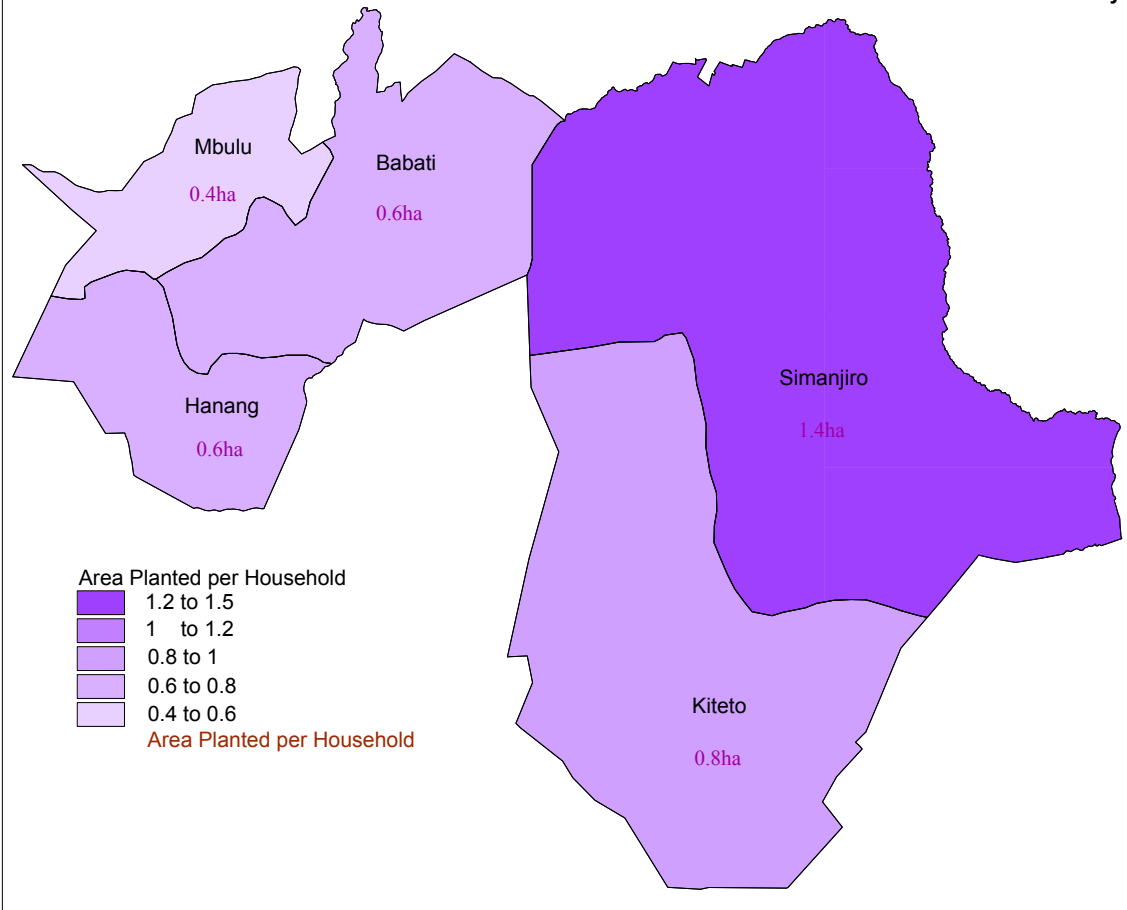
**MAP 3.16 MANYARA
Area Planted per Sunflower Growing
Households by District**



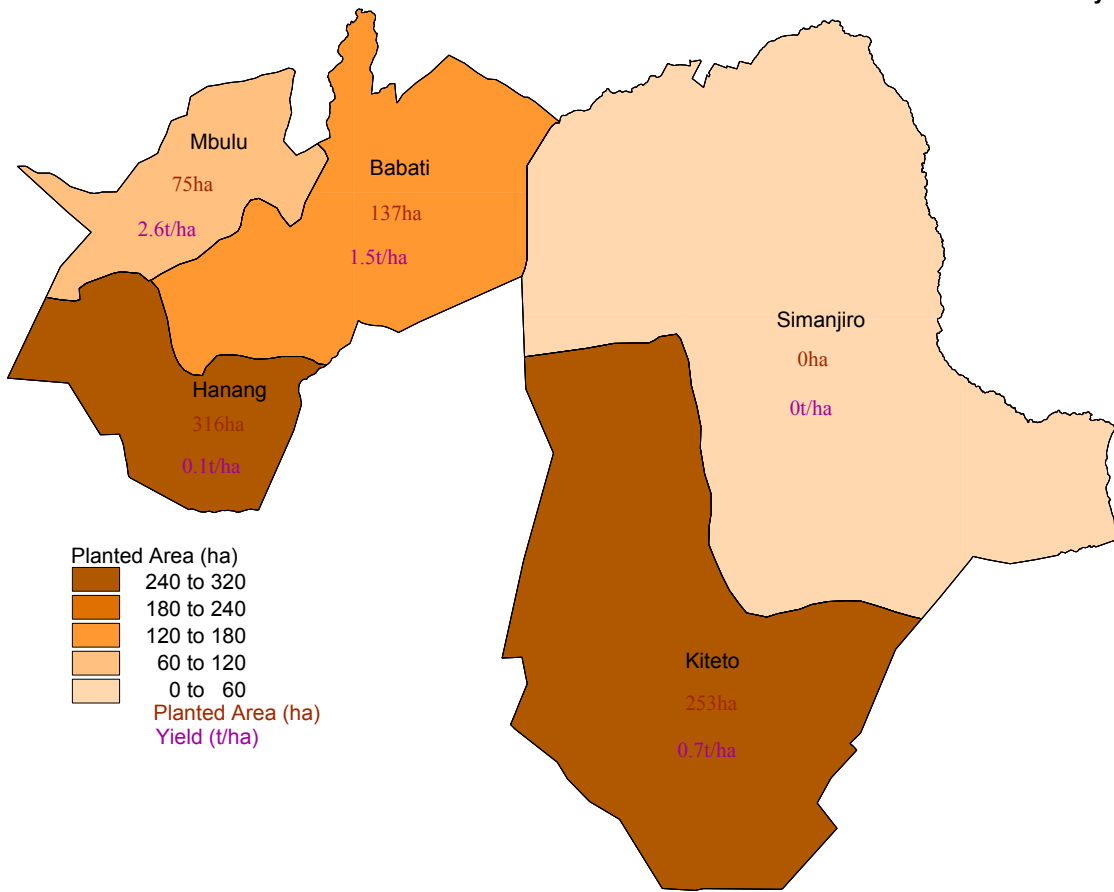
**MAP 3.17 MANYARA
Planted Area and Yield of
Beans by District**



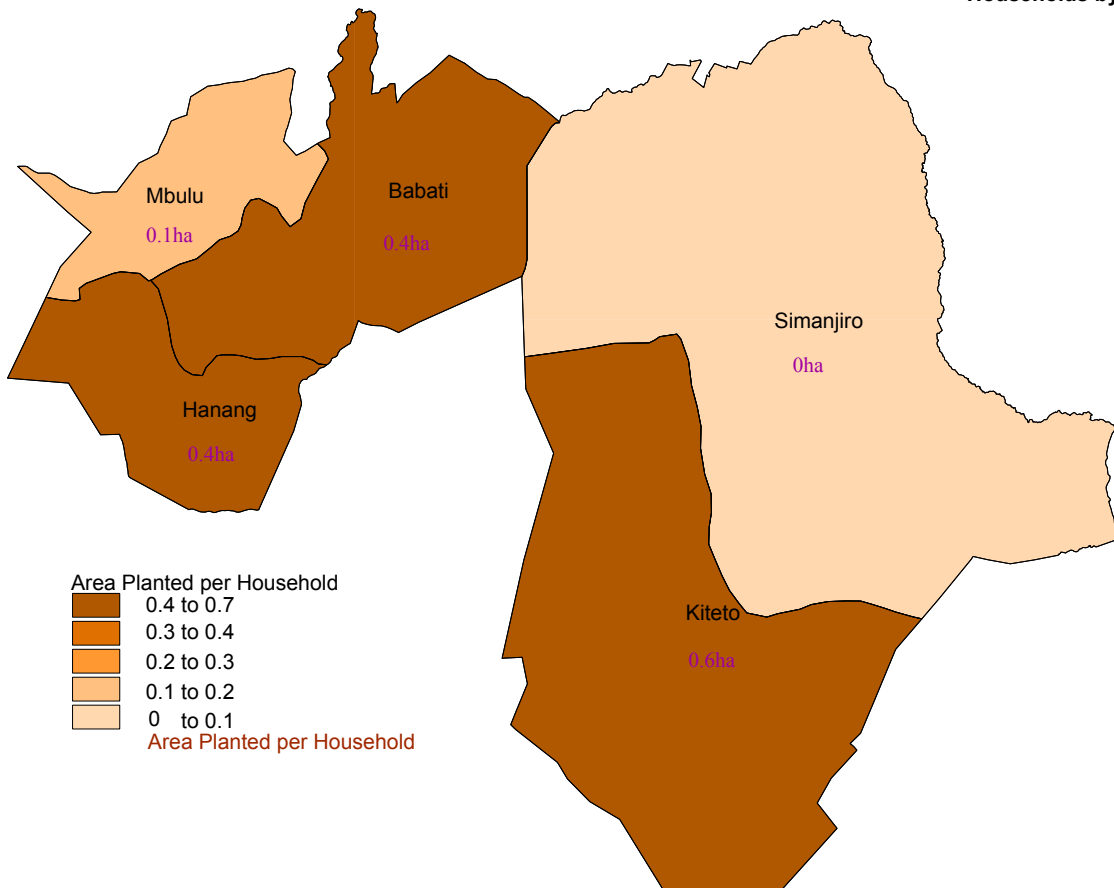
**MAP 3.18 MANYARA
Area Planted per Beans Growing
Households by District**



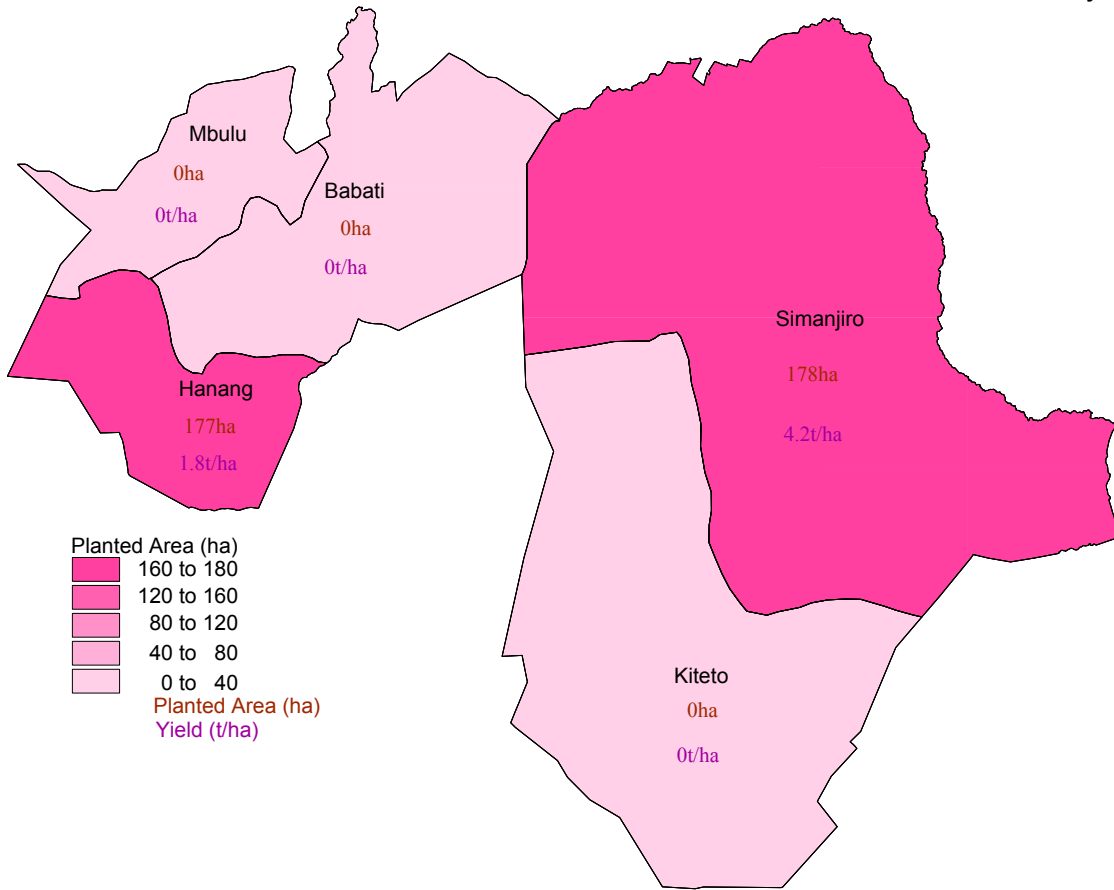
**MAP 3.19 MANYARA
Planted Area and Yield of
Cassava by District**



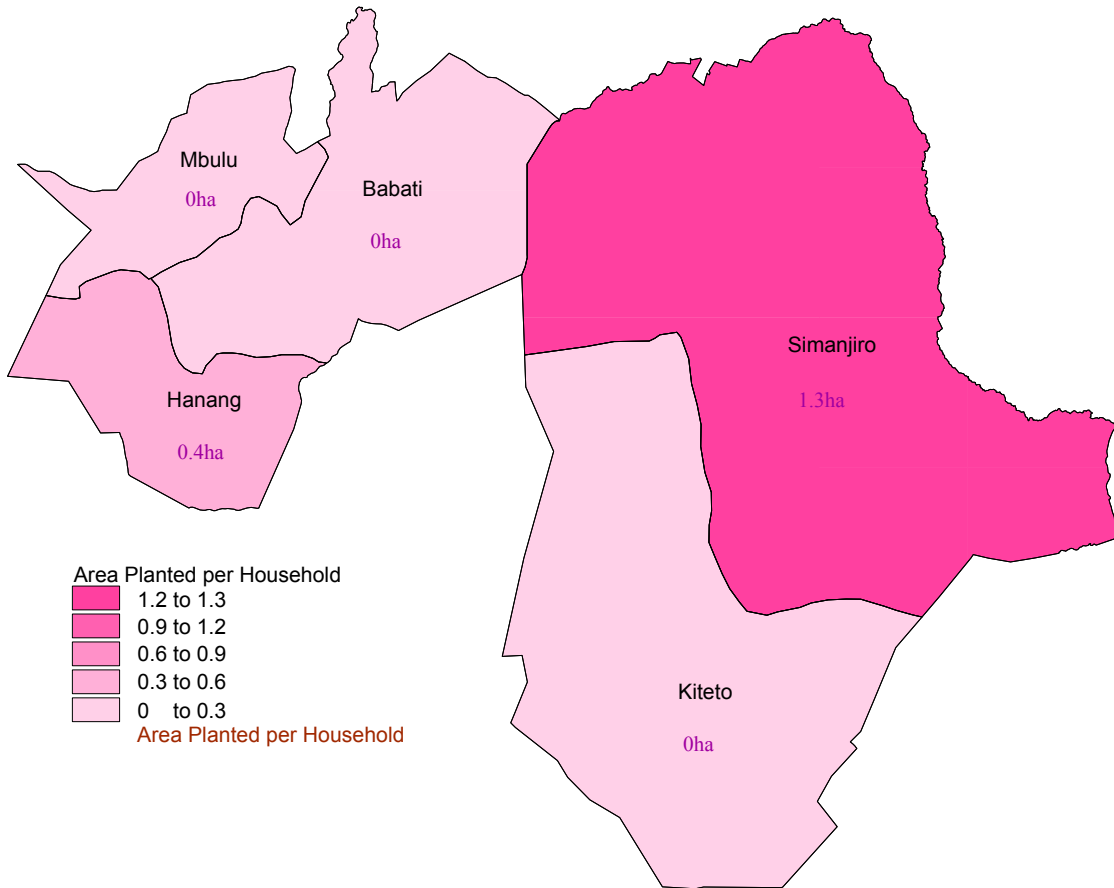
**MAP 3.20 MANYARA
Area Planted per Cassava Growing
Households by District**



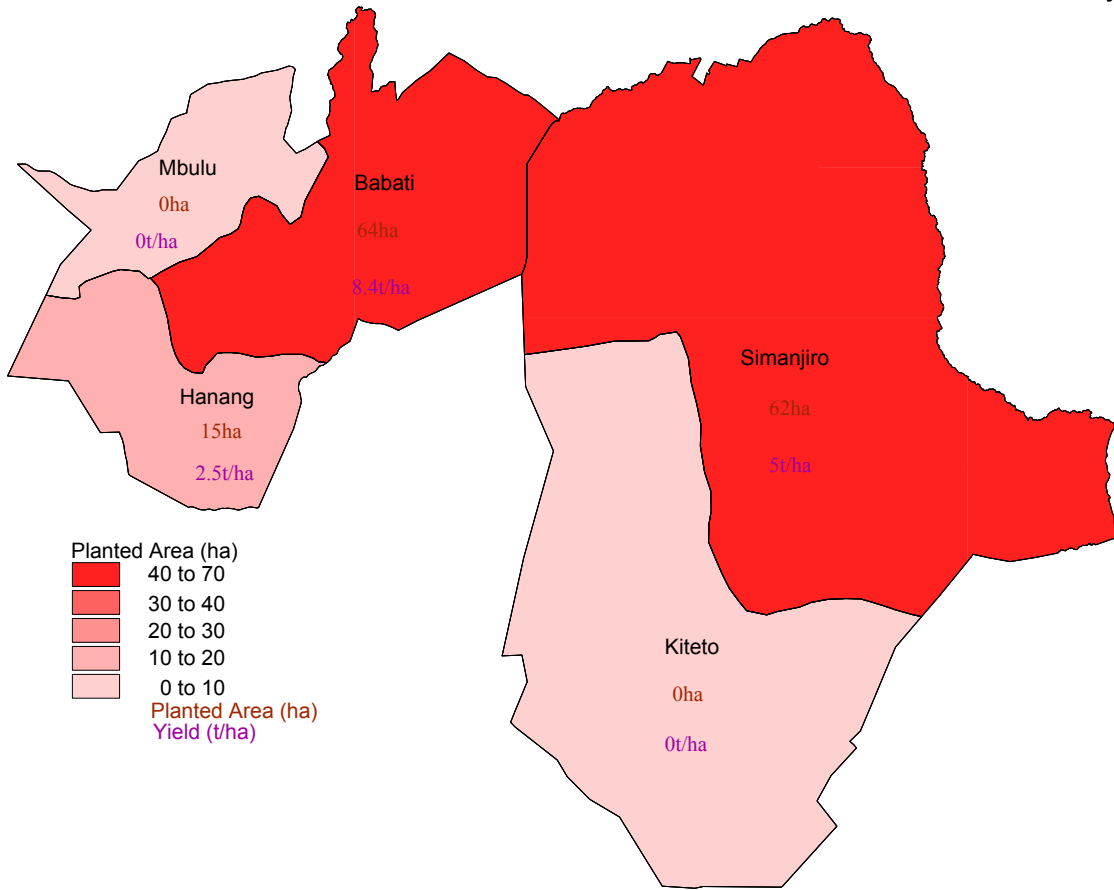
**MAP 3.21 MANYARA
Planted Area and Yield of
Onion by District**



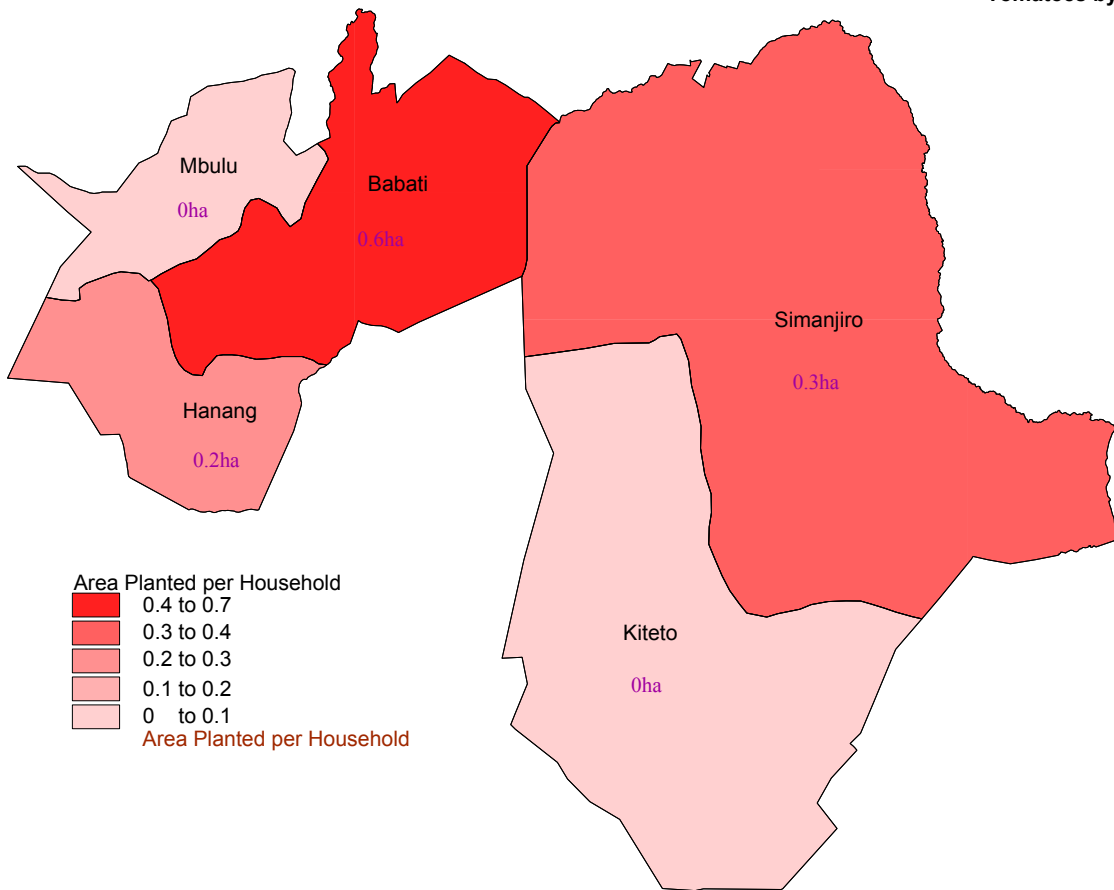
**MAP 3.22 MANYARA
Area Planted per Onion Growing
Households by District**



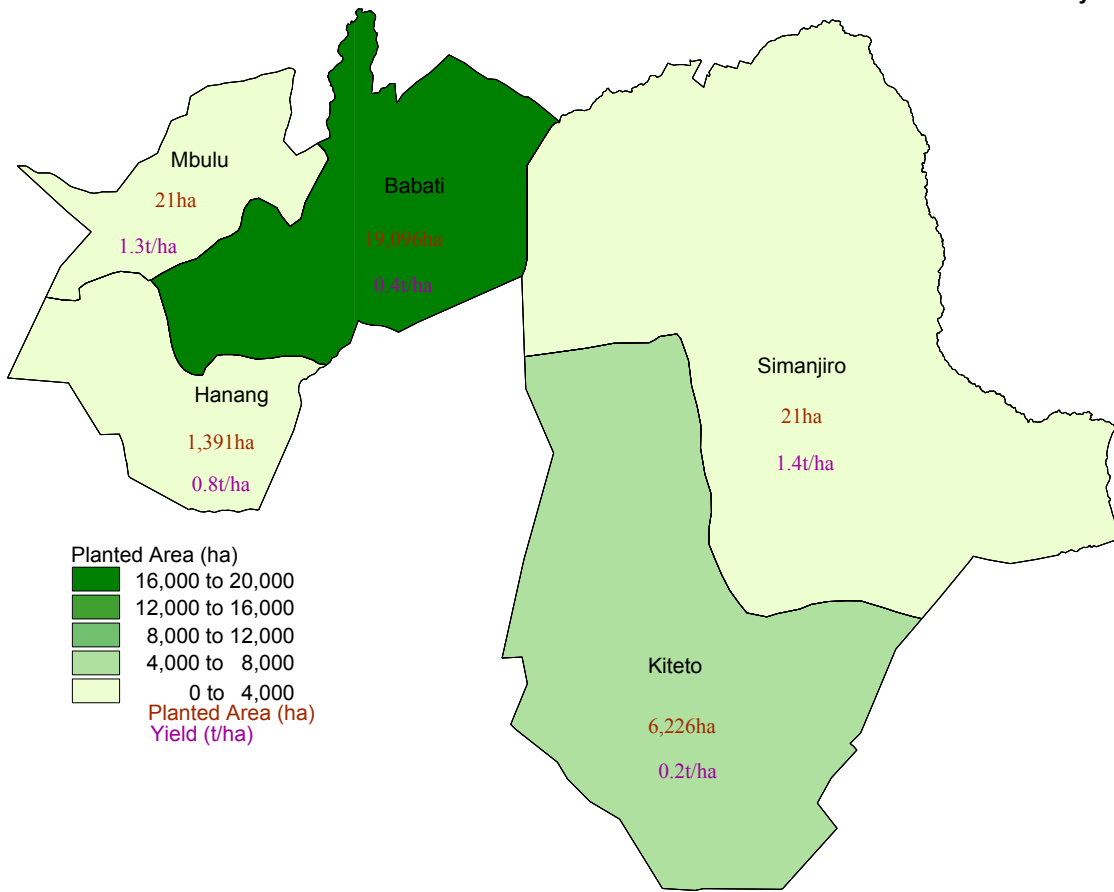
MAP 3.23 MANYARA
Planted Area and Yield of Tomatoes by District



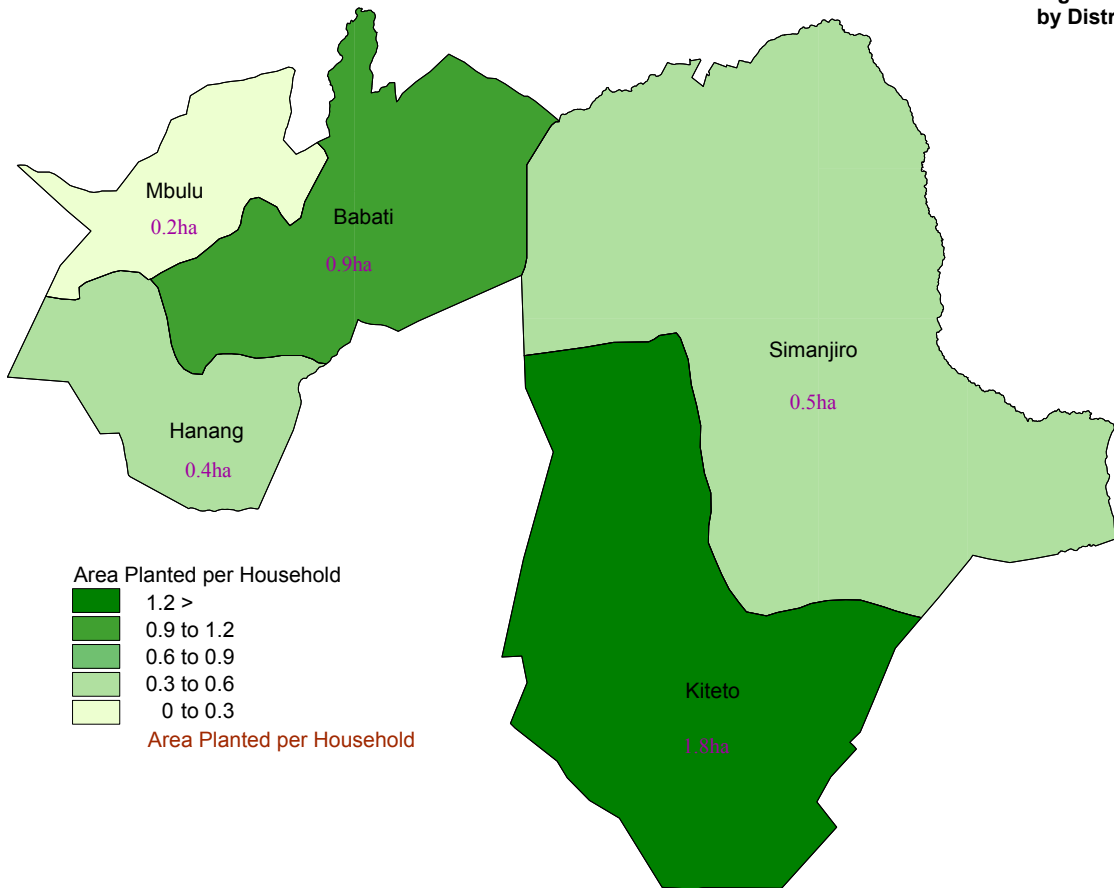
MAP 3.24 MANYARA
Area Planted per Onion Growing Tomatoes by District



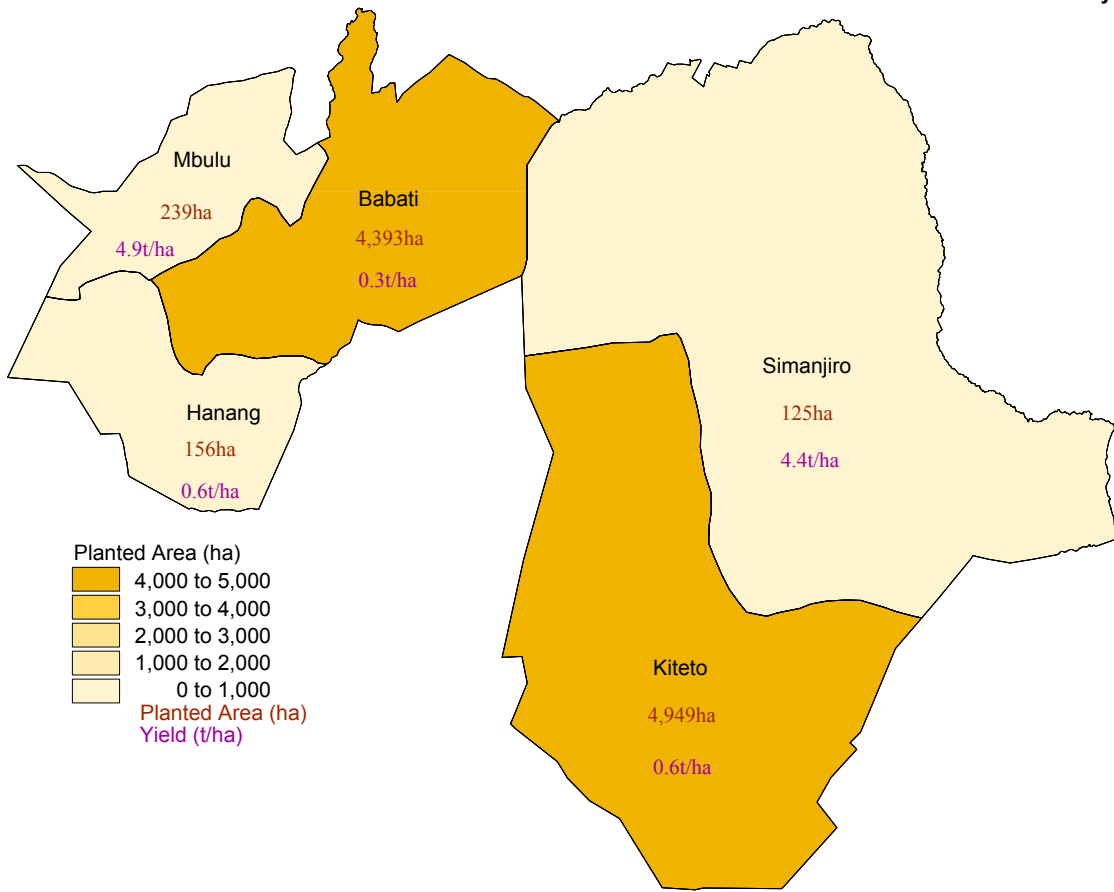
MAP 3.25 MANYARA
Planted Area and Yield of Pigeon Peas by District



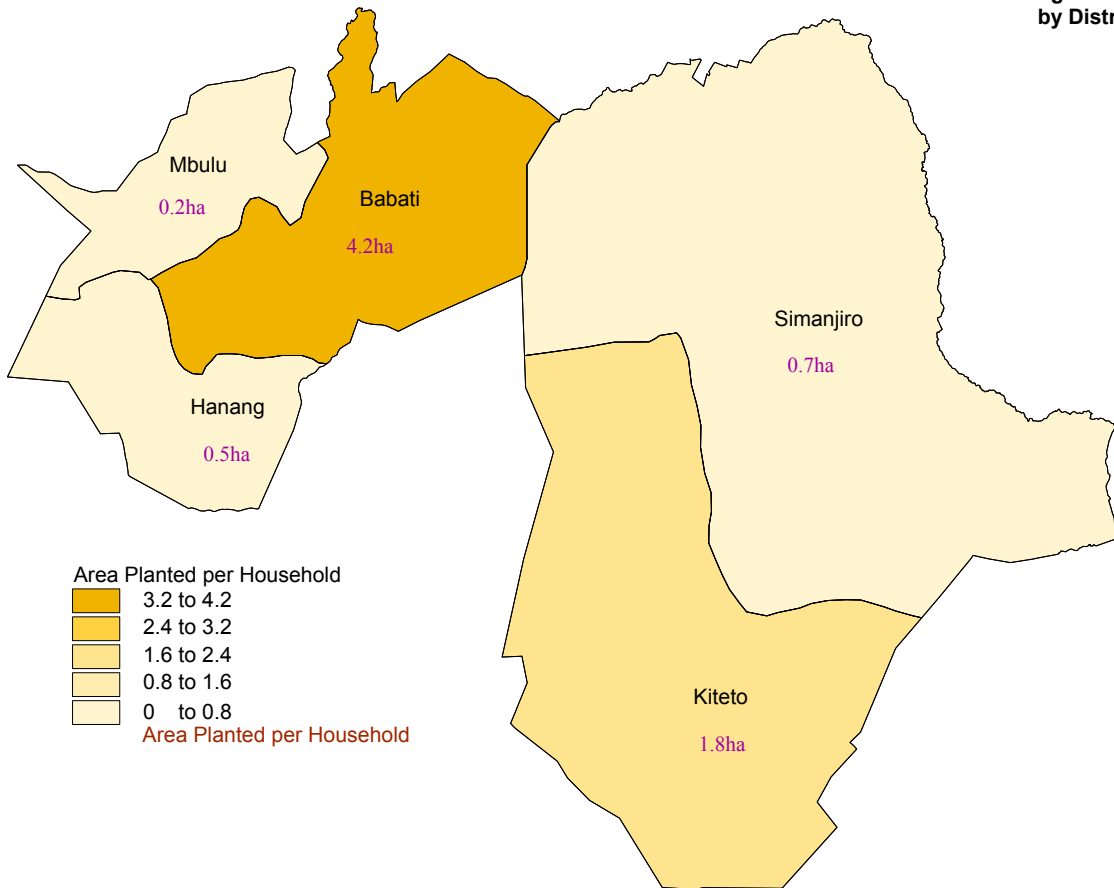
MAP 3.26 MANYARA
Area Planted per Pigeon Peas Growing Households by District



**MAP 3.27 MANYARA
Planted Area and Yield of
Bananas by District**



**MAP 3.28 MANYARA
Area Planted per Bananas
Growing Households
by District**

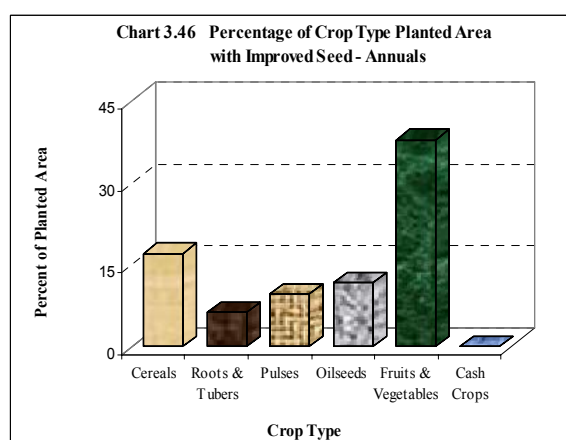
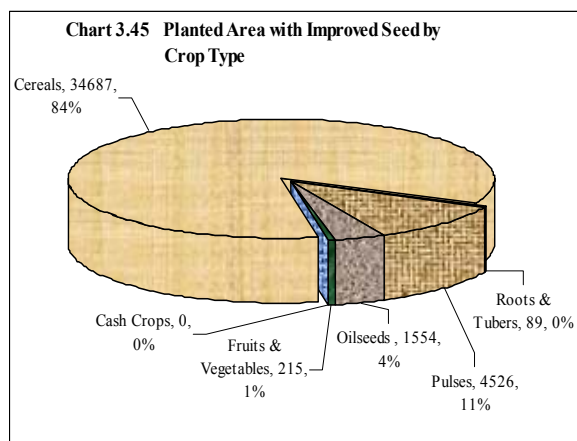
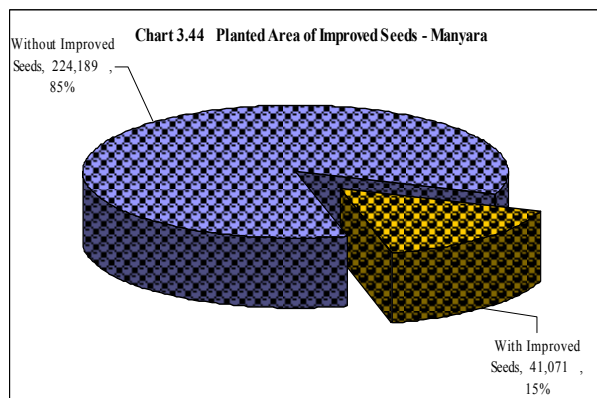


During the long rainy season, 59.1 percent of the total area cultivated by using oxen was planted with cereals, followed by pulses (33.5%), oil seeds (6.1%), roots and tubers (0.9%), fruit and vegetables (0.4%) and cash crops (0.1%).

3.5.3 Improved Seed Use

The planted area using improved seeds was estimated at 41,071 ha which represents 15 percent of the total area planted with the annual crops and vegetables. The percentage use of improved seed in the short rainy season was at 24.3 percent, higher than the corresponding percentage for the long rainy season (15.3%).

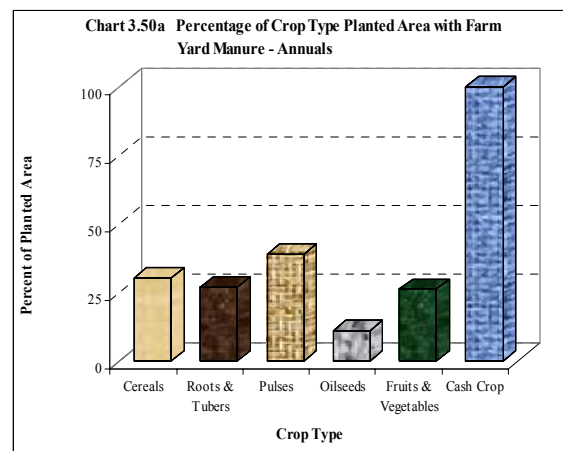
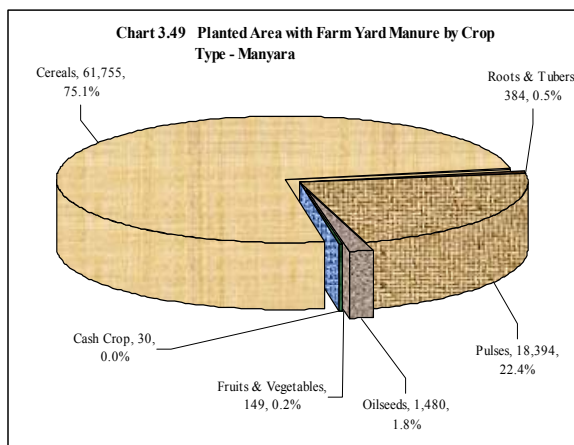
Cereals had the largest planted area with improved seeds (34,687 ha, 84% of the planted area with improved seeds) followed by pulses (4,526 ha, 11%), oil seeds (1,554 ha, 4%), fruits and vegetables (215 ha, 1%), root and tubers (89 ha, 0%), Improved seeds were not used in cash crops (Chart 3.45). However, the use of improved seed in fruit/ vegetables and cereals was much higher than in other crop types being (38% and 17% respectively). Only 6 percent of the planted area for root and tubers used improved seed (Chart 3.46).



3.5.4.1 Farm Yard Manure Use

The total planted area applied with farm yard manure in Manyara region was 82,194 ha. The number of households that applied farm yard manure in their annual crops during the long rainy season was 57,054 and it was applied to 79,945 ha representing 30.6 percent of the total area planted during that season (Table 3.10). Cereals had the highest percent of the total area planted with applied farm yard manure (73.7%), followed by pulses (22.1%), oil seeds (3.2%) and roots and tubers (0.45%) and fruits and vegetables (0.49%).

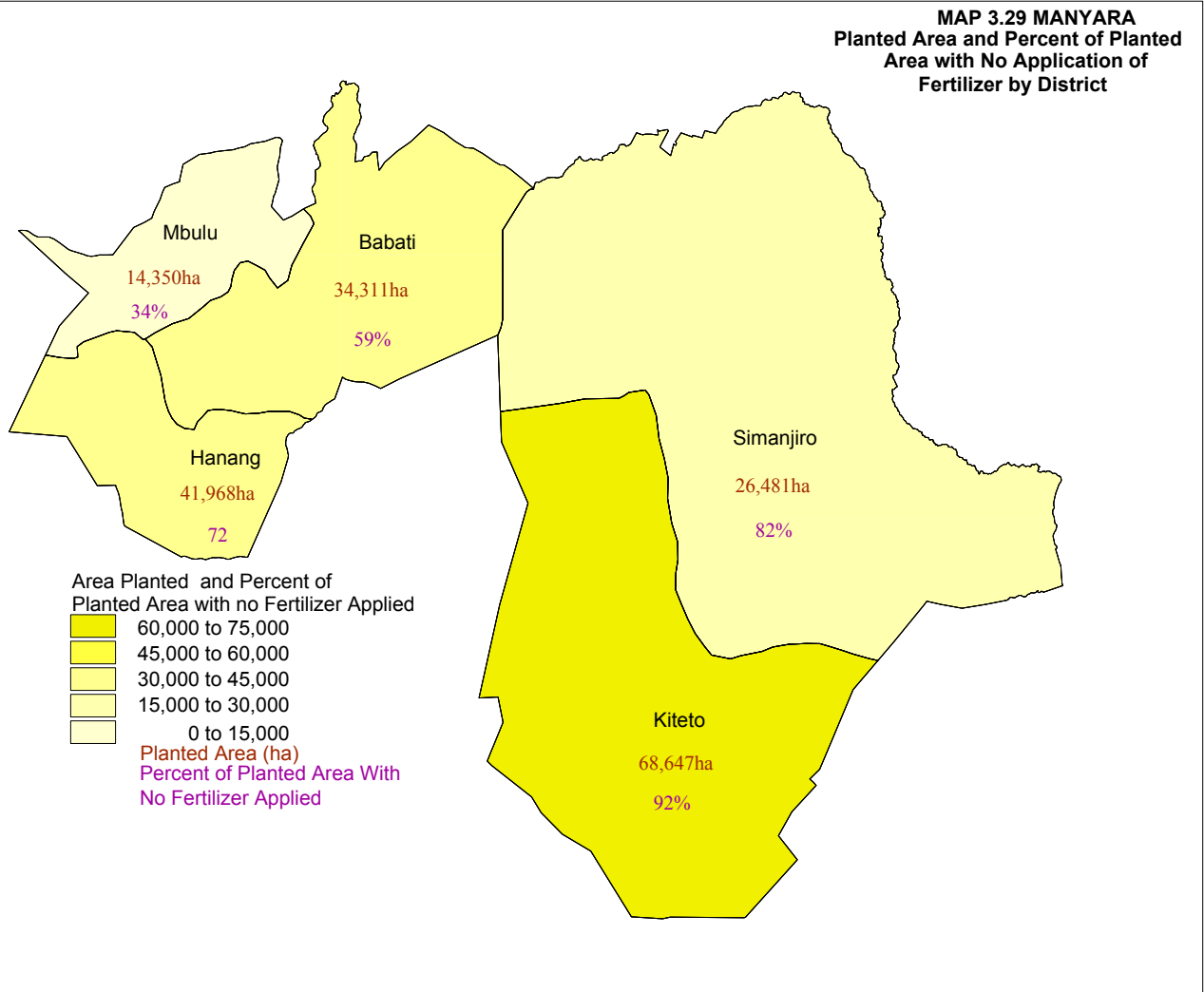
However, pulses had the highest percent of the planted area with farm yard manure (39% of the total area of pulses in Manyara). This was followed by cereals (30%), roots and tubers (27%), fruits and vegetables (26%) and oil seeds (11%) (Charts 3.49 and 3.50a).



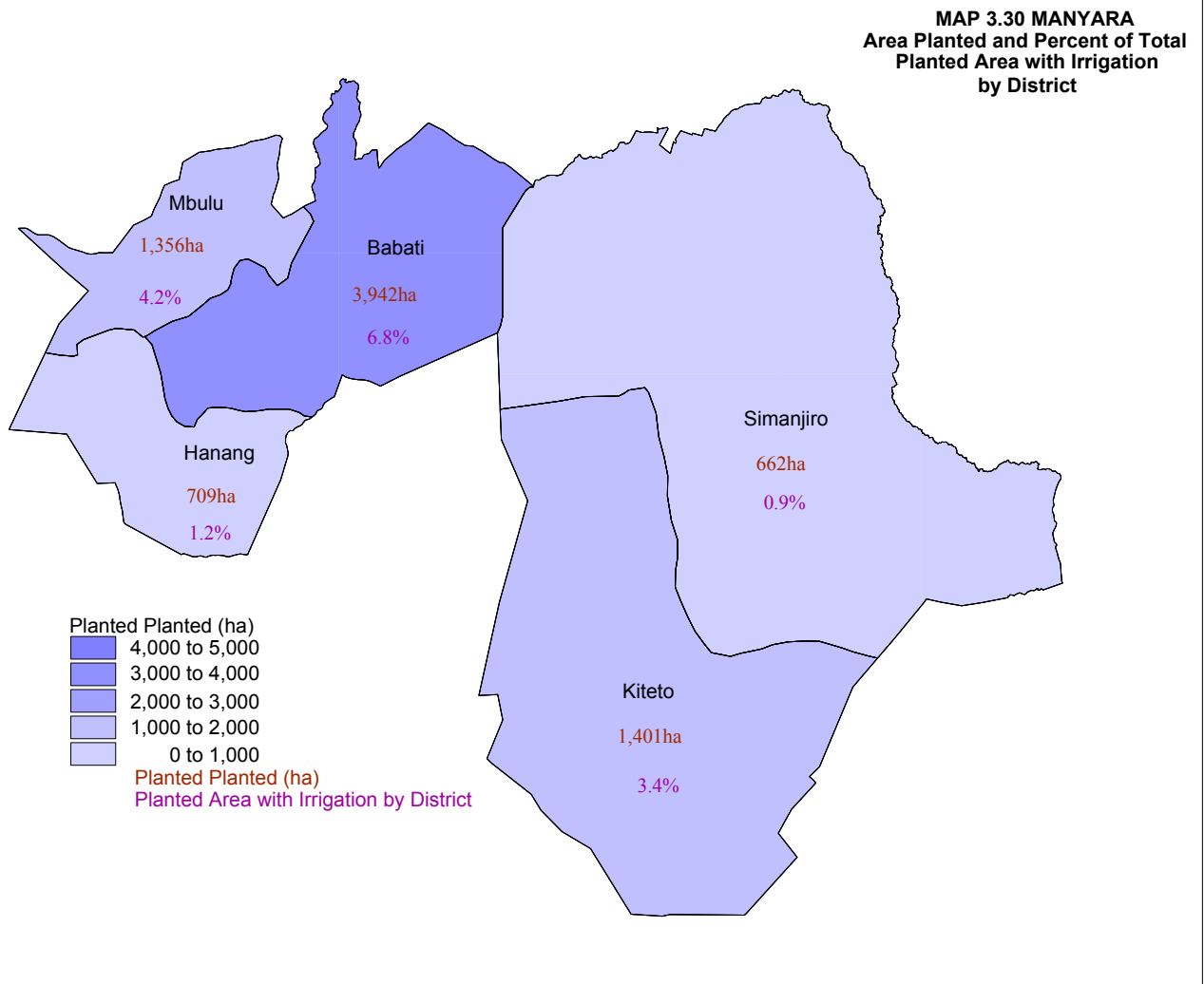
Farm yard manure is mostly used in Mbulu (65.1% of the total planted area in the district), followed by Babati (40.4%), Hanang (23.5%), Simanjiro (15.2%) and Kiteto (7.0%) (Chart 3.50b).

For permanent crops, most farm yard manure was used in the production of bananas (48.7%), followed by pigeon peas (33.3%) and coffee (11.7%).

MAP 3.29 MANYARA
Planted Area and Percent of Planted Area with No Application of Fertilizer by District



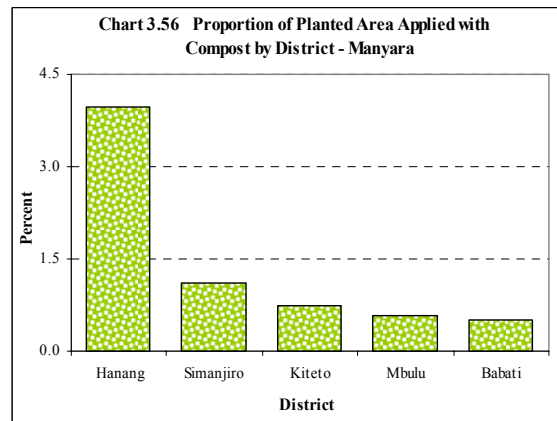
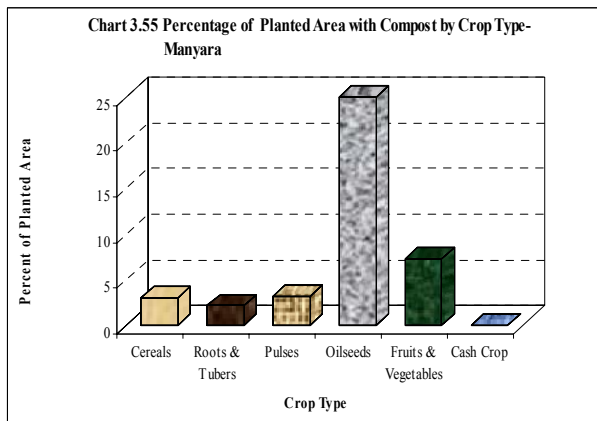
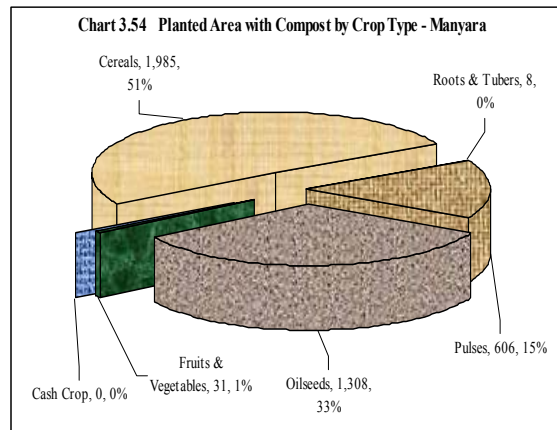
MAP 3.30 MANYARA
Area Planted and Percent of Total Planted Area with Irrigation by District



3.5.4.3 Compost Use

The total planted area applied with compost was 3,938 ha which represents only 1.5 percent of the total planted area with annual crops in the region and 4.5 percent of the total planted area with fertilisers in the region. The number of households that applied compost manure on their annual crops during the long rainy season was 1,449 ha and it was applied to 3,846 ha representing 1.5 percent of the total area planted.

The results show that 51 percent of the area applied with compost was planted with cereals, followed by pulses (33%) oilseeds (15%)and fruit and vegetables (1%). No compost was applied to cash crops (Chart 3.54).

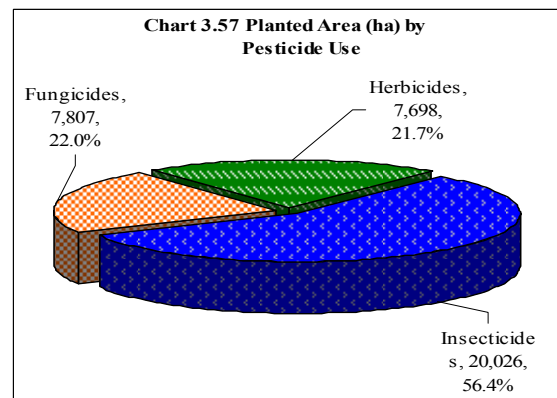


The proportion of area applied with compost was very low for each type of crop (0 to 9%); however the distribution of the total area using compost manure shows that 46.6 percent of this area was cultivated with oil seeds, followed by fruits and vegetables (7.2%), cereals (3.1%), pulses (3.1%) and fruit and vegetables (21%)(Chart 3.55).

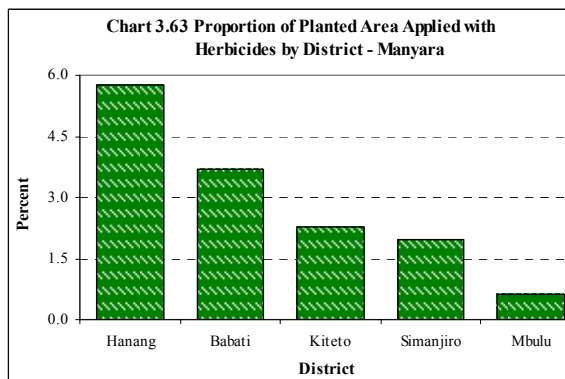
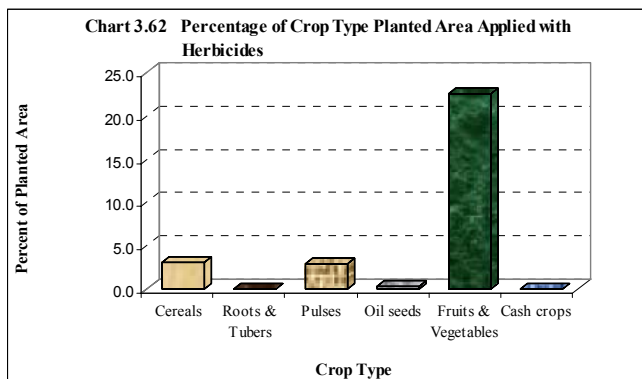
Compost was mostly used in Hanang (4% of the total planted area in the district), and this was closely followed by Simanjiro (1.1%). Other districts, like Babati used the least compost (0.5%) (Chart 3.56) In permanent crops, compost was mainly used on bananas (1%).

3.5.5 Pesticides Use

Pesticides are chemicals used for controlling insects, diseases and weeds. This section analyses the use of these chemicals by smallholders on both annual and permanent crops in Manyara region. Insecticides were applied to a planted area of 35,531 ha of annual crops and vegetables. Insecticides were the most common pesticides used in the region (56.4% of the total area applied with pesticides). This was followed by fungicides (22.0%) and herbicides (21.7%) (Chart 3.57).



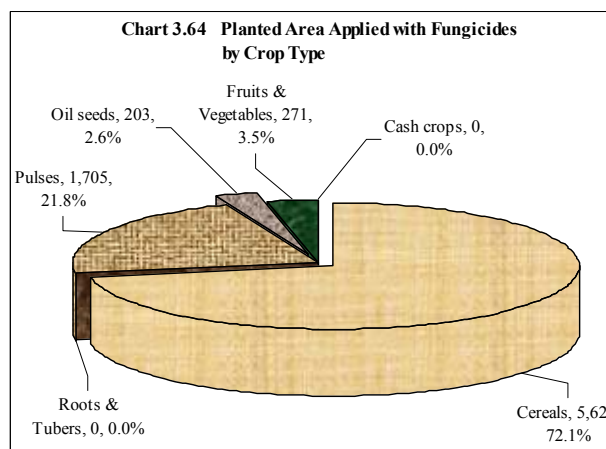
However, the percent of herbicide use on fruit and vegetables was much greater than in other crop types (22.5%) while only 0.3 percent of oil seeds was applied with herbicides (Chart 3.62). The top two annual crops with highest percentage use of herbicides in terms of planted area were tomatoes (71.6%) and paddy (49.7%).



Hanang had the highest percent of planted area with herbicides (5.8% of the total planted area with annual crops in the district). This was followed by Babati (3.7%, Kiteto (2.3%), Simanjiro (2.0%) and Mbulu (0.6%) (Chart 3.63).

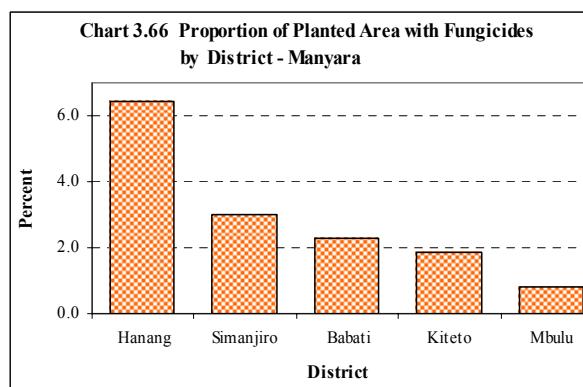
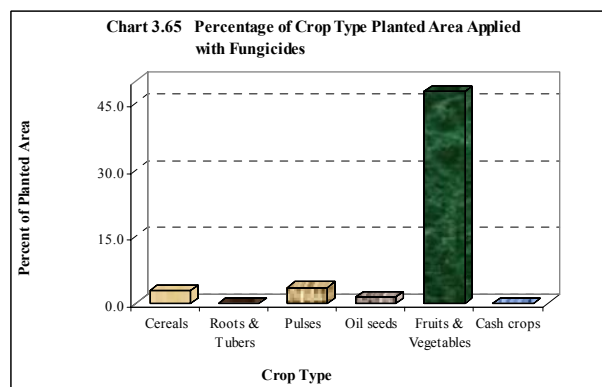
3.5.5.3 Fungicide Use

The planted area applied with fungicides was 7,807 ha which represented 2.9 percent of the total planted area for annual crops and vegetables. The percentage use of fungicides in the short rainy season (5.7%) was higher than the corresponding percentage in the long rainy season (2.9%). Cereals had the largest planted area applied with fungicides (5,628ha, 72.1%) ,followed by pulses (1,705 ha, 21.8%), fruits and vegetables (271 ha, 3.5%) and oil seeds (203 ha, 2.6%). No fungicides were used on cash crops (Chart 3.64).



However, the percentage use of fungicide in fruits and vegetables was much greater than in other crop types (47.6%), while only 3.6 percent of pulses, 2.8 percent of cereals and 15 percent of oil seeds were applied with fungicides (Chart 3.65).

Hanang had the highest percent of planted area with fungicides (6.7% of the total planted area with annual crops in the district). This was closely followed by Babati (3.5%), Simanjiro (1.9%), Kiteto (1.5%) and Mbulu (1.1%) (Chart 3.66).



3.5.6 Harvesting Methods

The main harvesting method for cereals was reported to be by hand. Very small amounts of maize were harvested by machine (1.3%). All other cereals and annual crops were harvested by hand.

3.5.7 Threshing Methods

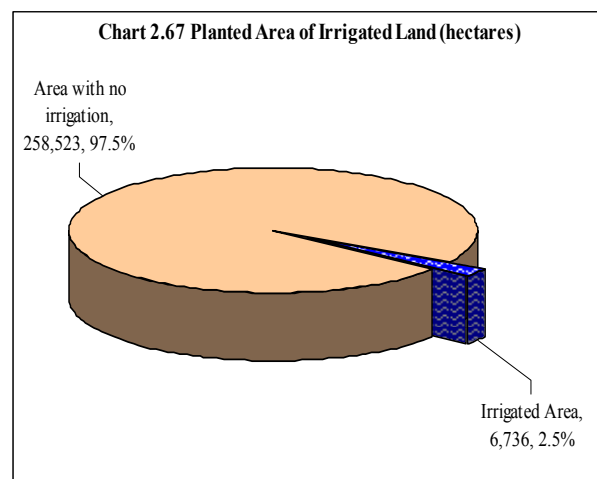
Hand threshing was the most common method used, with 80 percent of the total area planted with cereals during the long rainy season being threshed by hand. Draft animals, human powered tools and engine driven machines were only used on crops harvested from 0.7percent, 5.6 percent and 8.1 percent of the total planted area respectively.

3.6 Irrigation

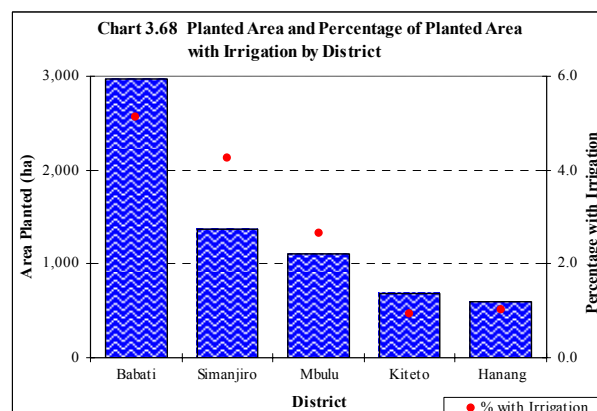
Water is the limiting factor to crop production in many areas in Tanzania and without water most other agricultural practices applied to crops do not result in a significant increases in yields. This section deals with the area under irrigation by different crops and the means by which water was extracted from the source and applied to the field.

3.6.1 Area Planted with Annual Crops and Under Irrigation

In Manyara region, the area of annual crops under irrigation was 6,736 ha representing 2.5 percent of the total area planted (Chart 3.67). The area under irrigation during the short rainy season was 765 ha accounting for 11 percent of the total area under irrigation. Some crops, especially vegetables, were predominantly grown in the long rainy season with irrigation. In the long rainy season, 56 percent of the area planted with vegetables was irrigated, whilst 100 percent of the area with vegetables was irrigated in the short rainy season.



The district with the largest planted area under irrigation with annual crops was Babati (2,977 ha, 44.2% of the total irrigated planted area with annual crops in the region). This is closely followed by Simanjiro with (1,368 ha, 20.3%) and then Mbulu (1,103 ha, 16.4%). When expressed as a percentage of the total area planted in each district, Babati had the highest with 5.1 percent of the planted area in the district under irrigation. This is followed by Simanjiro (4.3%), Mbulu (2.6%), Hanang (1.0%) and Kiteto (0.9%) (Chart 3.68 and Map 3.29).

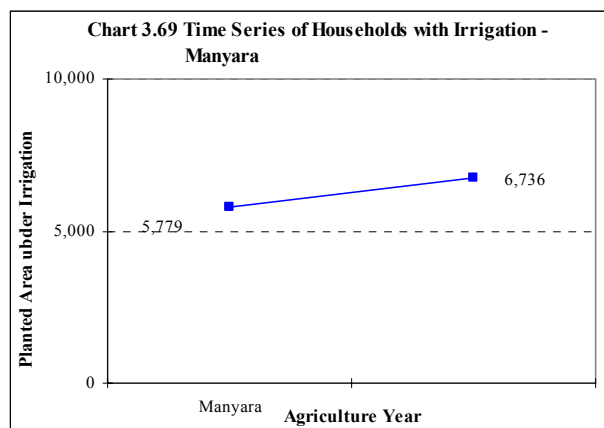


Of all the different crops and in terms of proportion of the irrigated planted area, okra and onion were the most irrigated crops with 100 percent irrigation followed by paddy (95%).

In terms of crop type, the area under irrigation with cereals was 5,477 ha (81.3% of the total area under irrigation), followed by pulses with 869 ha (12.9%), fruit and vegetables (364 ha, 5.4%) and roots and tubers (7 ha, 0.1%), oil seeds (19ha, 0.3%). All of the irrigation on cereals was applied to maize and paddy.

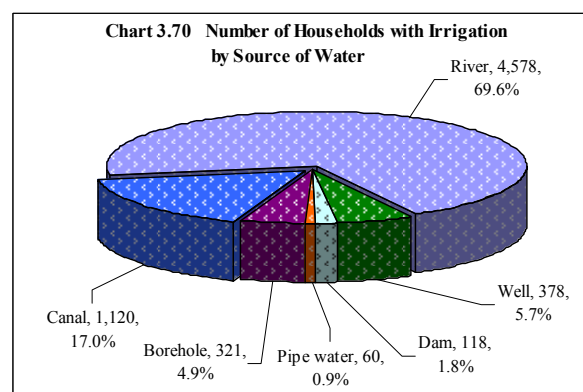
The area of fruit and vegetables under irrigation was 364 ha which represents 63 percent of the total planted area with fruit and vegetables. Onions, tomatoes and okra were the most irrigated crops.

The planted area with irrigation in Manyara region appears to have increased steadily over a period of 10 years from 5,779 to 6,736 hectares. However, this may not be statistically significant due to the small number of households sampled with irrigation.

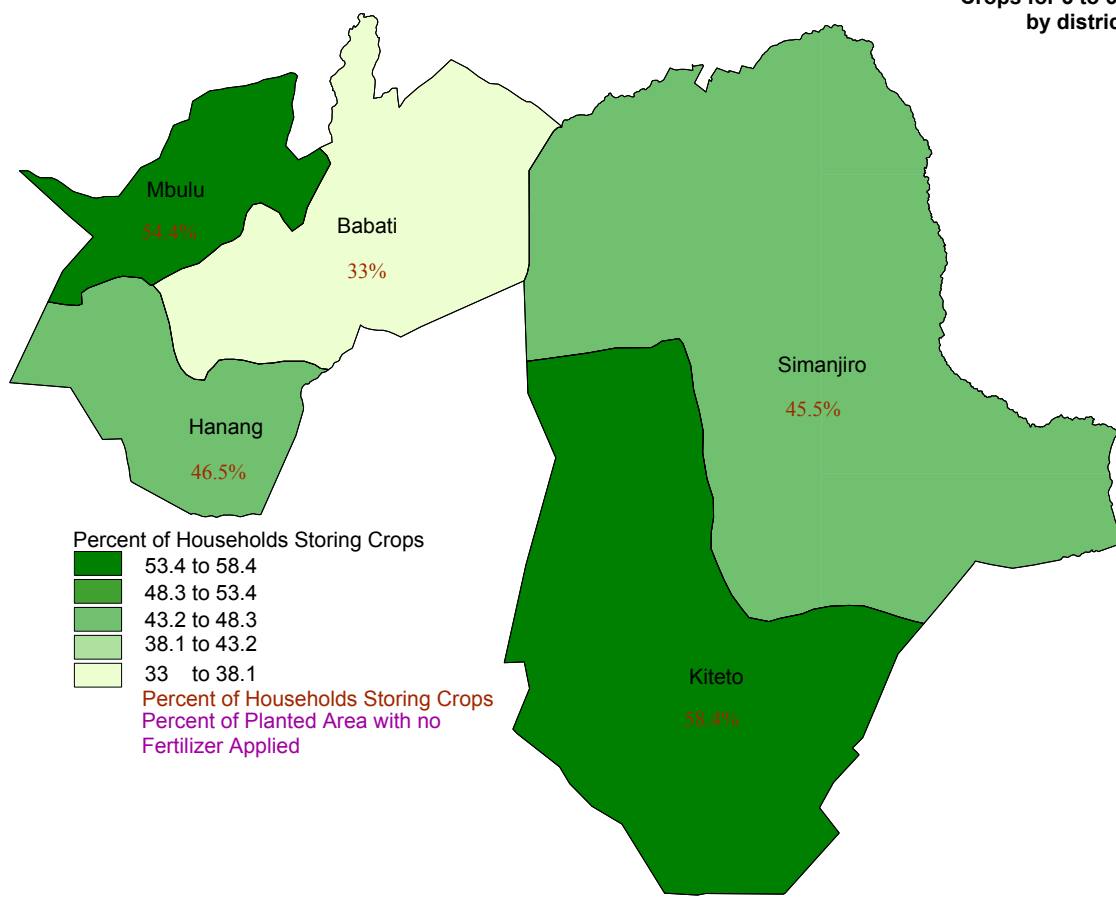


3.6.2 Sources of Water Used for Irrigation

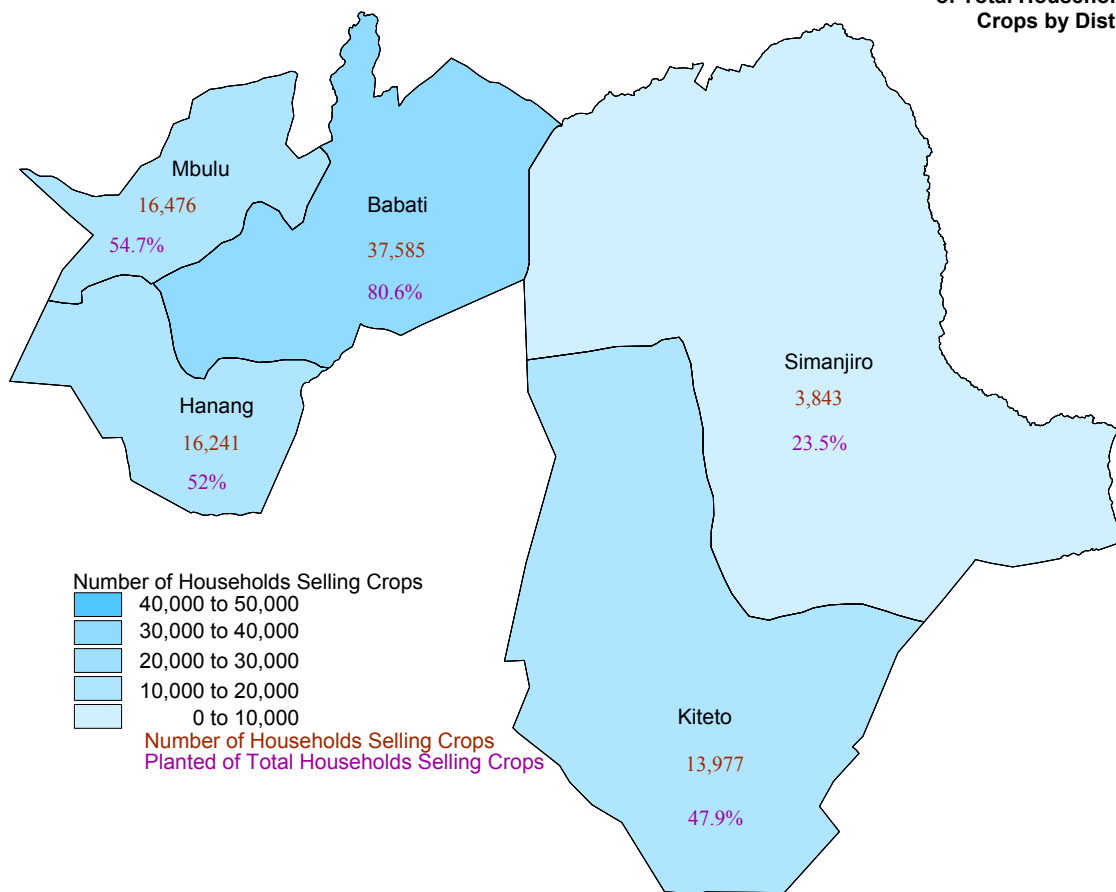
The main source of water used for irrigation was the river (69.6% of households with irrigation). This was followed by canals (17%) and wells (5.7%). Only 0.9 percent of the households used piped water and the proportion of households that used borehole and dams as sources of water for irrigation were very few (4.9% and 1.8% respectively). The highest percent of households that obtain their irrigation water from rivers are found in Simanjiro and Babati districts (82% and 76% respectively) (Chart 3.70).



**MAP 3.31 MANYARA
Percent of Households Storing
Crops for 3 to 6 Months
by district**



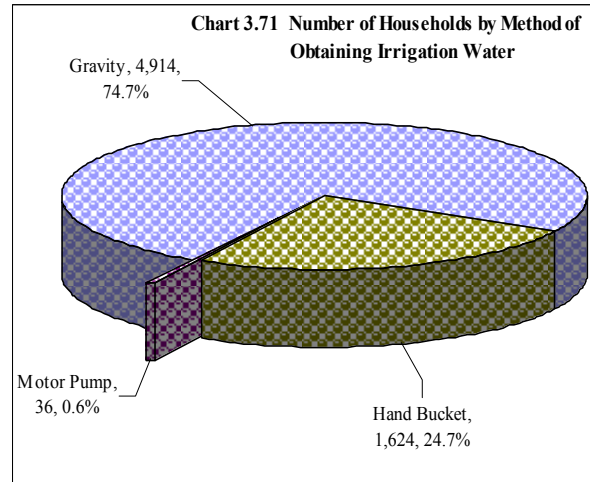
**MAP 3.32 MANYARA
Number of Households and Percent
of Total Households Selling
Crops by District**



3.6.3 Methods of Obtaining Water for Irrigation

Gravity was the most common means of obtaining water for irrigation with 74.7 percent of households using this method. This was followed by hand bucket with 24.7 percent of households and motor pump (0.6%) (Chart 3.71).

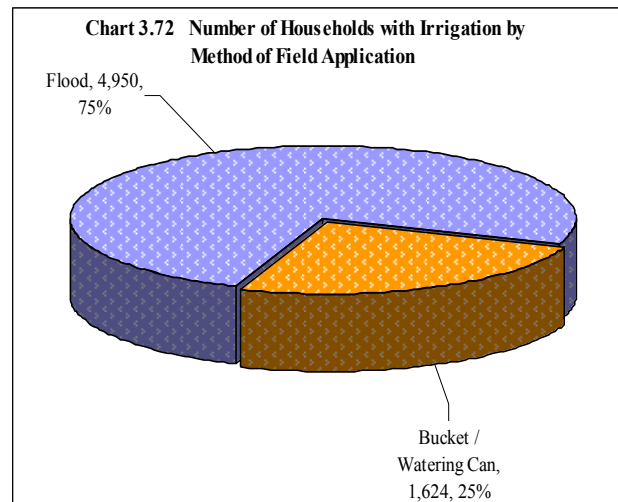
Hand bucket for obtaining water was used by 55 percent of the agricultural households with irrigation in Mbulu district, whilst gravity was used by most of the agricultural households in Babati, Simanjiro and Hanang districts. The few households with Irrigation in Kiteto district used hand bucket for obtaining water for irrigation.



3.6.4 Methods of Water Application

Most households in Manyara region used flood irrigation (75% of households using irrigation) as a method of field application. This was followed by hand bucket/watering can (25%) (Chart 3.72).

All households with irrigation in Simanjiro and Hanang districts and most households in Babati district used the flood method for applying irrigation water from the source. However, most households in Mbulu district and all households in Kiteto district used hand bucket/watering cans for irrigation water application.



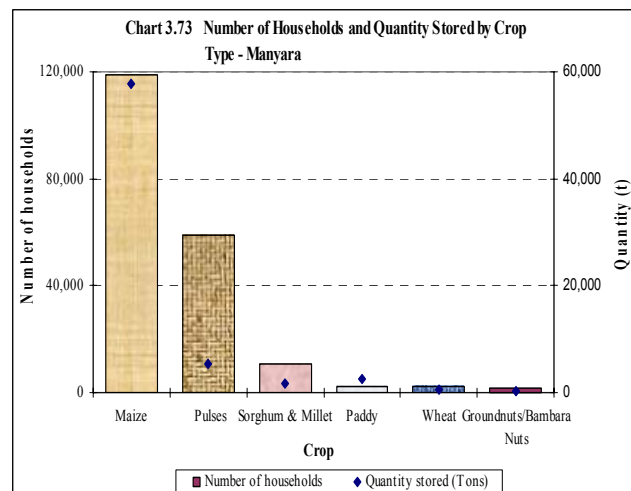
3.7 Crop Storage, Processing and Marketing

3.7.1 Crop Storage

Crop storage means keeping a crop for a certain period of time as food for the household, in order to sell at higher prices or as seed for planting in the following season.

The results for Manyara region show that there were 123,200 crop growing households (82% of the total crop growing households in Manyara region) that stored various agricultural products in the region.

The most important stored crop was maize with 118,797

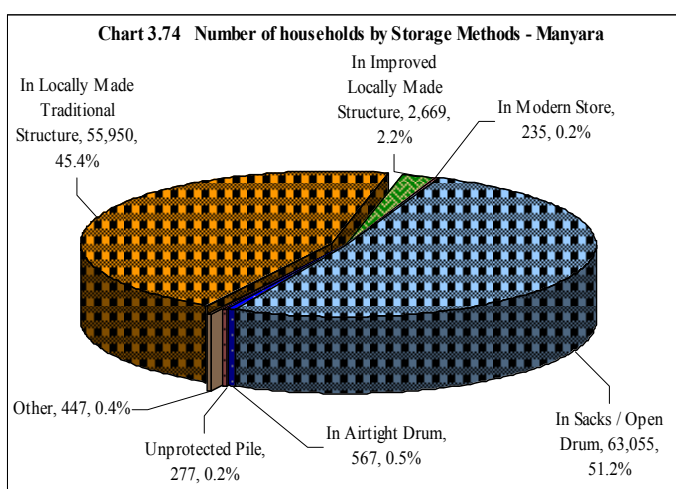


households storing 57,729 tonnes as of 1st January 2004. This was followed by beans and other pulses (58,728 households,

5,409t), sorghum and millets (10,909 households, 1,684t), paddy (2,543 households, 2,540t), wheat (2,000 household, 650t) and groundnuts (1,638 household, 145t). Other crops were stored in very small amounts.

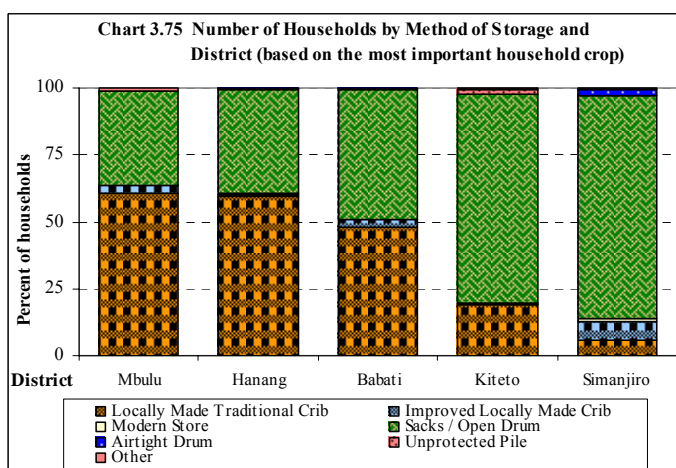
3.7.1.1 Methods of Storage

The region had 63,055 crop growing households storing their produce in sacks/open drum (51.2% of households that stored crops in the region). The number of households that stored their produce in locally made traditional structures was 55,950 (45.4%). This was followed by improved locally made structures (2,669 households, 2.2%), air tight drum (567 household, 0.5%), unprotected piles (277 households, 0.2%), and modern stores (235 households, 0.2%) and other methods (447 households, 0.4%) (Chart 3.74).



Sacks/open drums were the dominant storage method with Simanjiro having the highest percent of households using this method (83% of the total number of households storing crop products). This was followed by Kiteto (78%), Babati (48%), Hanang (39%) and Mbulu (36%).

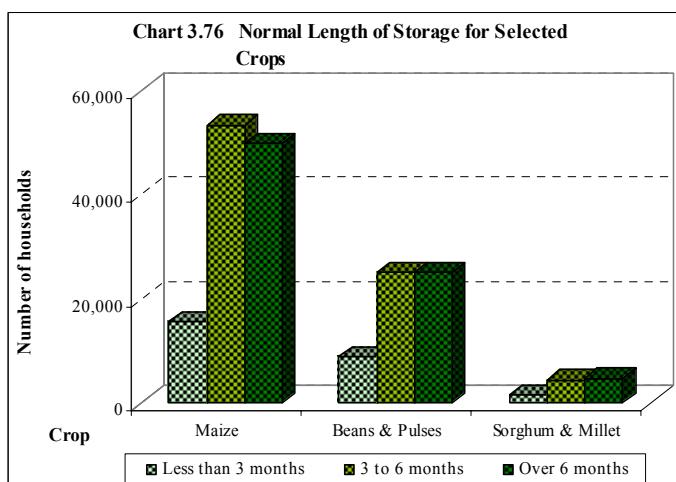
The highest percent of households using locally made traditional crib was in Mbulu and Hanang districts (61% and 60% of the total number of households storing crops respectively), followed by Babati (48%), Kiteto (19%) and Simanjiro (6%) (Chart 3.75).



3.7.1.2 Duration of Storage

Most households (44% of the households storing crops in Manyara region) stored their produce for a period of 3 to 6 months followed by those who stored for over 6 months (42%). The minority of households stored their crops for a period of less than 3 months (14%).

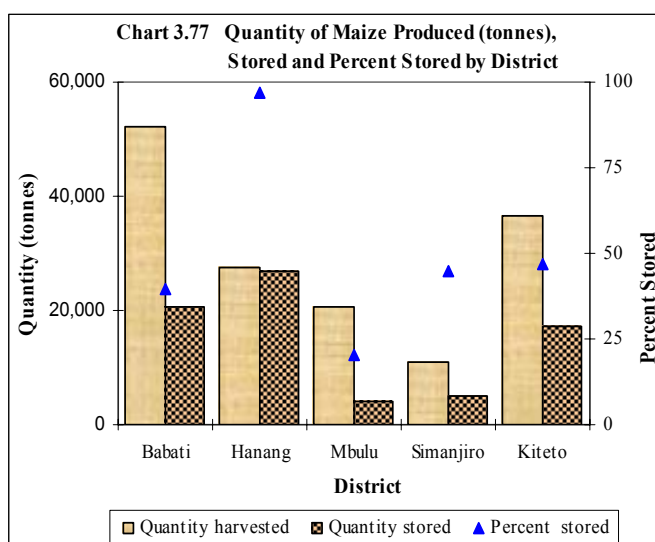
Most households that stored pulses stored them for a period more than 6 months followed by those who stored for a period of 3 to 6 months. A small number of households stored pulses for the period of less than 3 months. However, most households that stored maize stored them for a period of 3 to 6 months followed by those who stored for a period of more than 6 months (Chart 3.76).



The proportion of households that stored their produce for the duration of 3 to 6 months was highest in Mbulu district (58.4%), followed by Simanjiro (54.4%), Hanang (46.5%), Kiteto (44.7%) and Babati (33%) (Map 3.30).

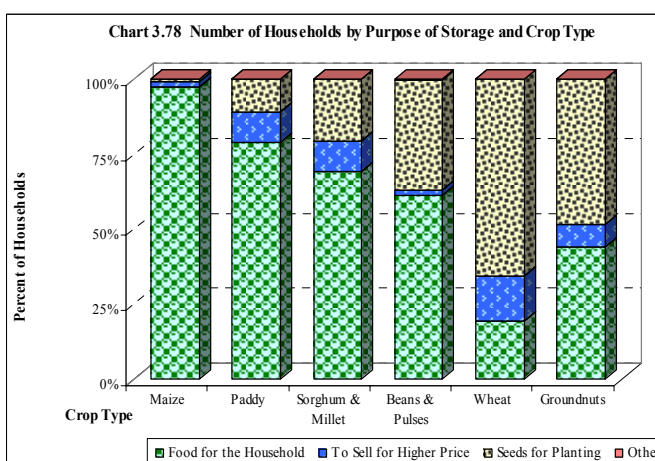
District comparison of duration of storage cannot be done for all crops combined. However, the analysis has been done for maize only as it is the most commonly stored crop. In general, quantity stored was related to the quantity produced.

Most districts with greater production had a higher percent of their crop stored as on 1st October 2003 (Chart 3.77). However, households in Mbulu district stored relatively little maize in comparison to the quantity produced indicating that the quantity stored was determined by the food and seed requirements of the household and not to sell during the “off-season” when the farm gate price of maize is higher.



3.7.1.3 Purposes of Storage

Subsistence food crops (maize, paddy, sorghum and millets, beans and pulses) are mainly stored for household consumption. The percent of households that stored maize for household consumption as the main purpose of storage was 97.4 percent, followed by seed for planting. Practically all stored annual crops were stored for the purpose of food for the household (Chart 3.78).



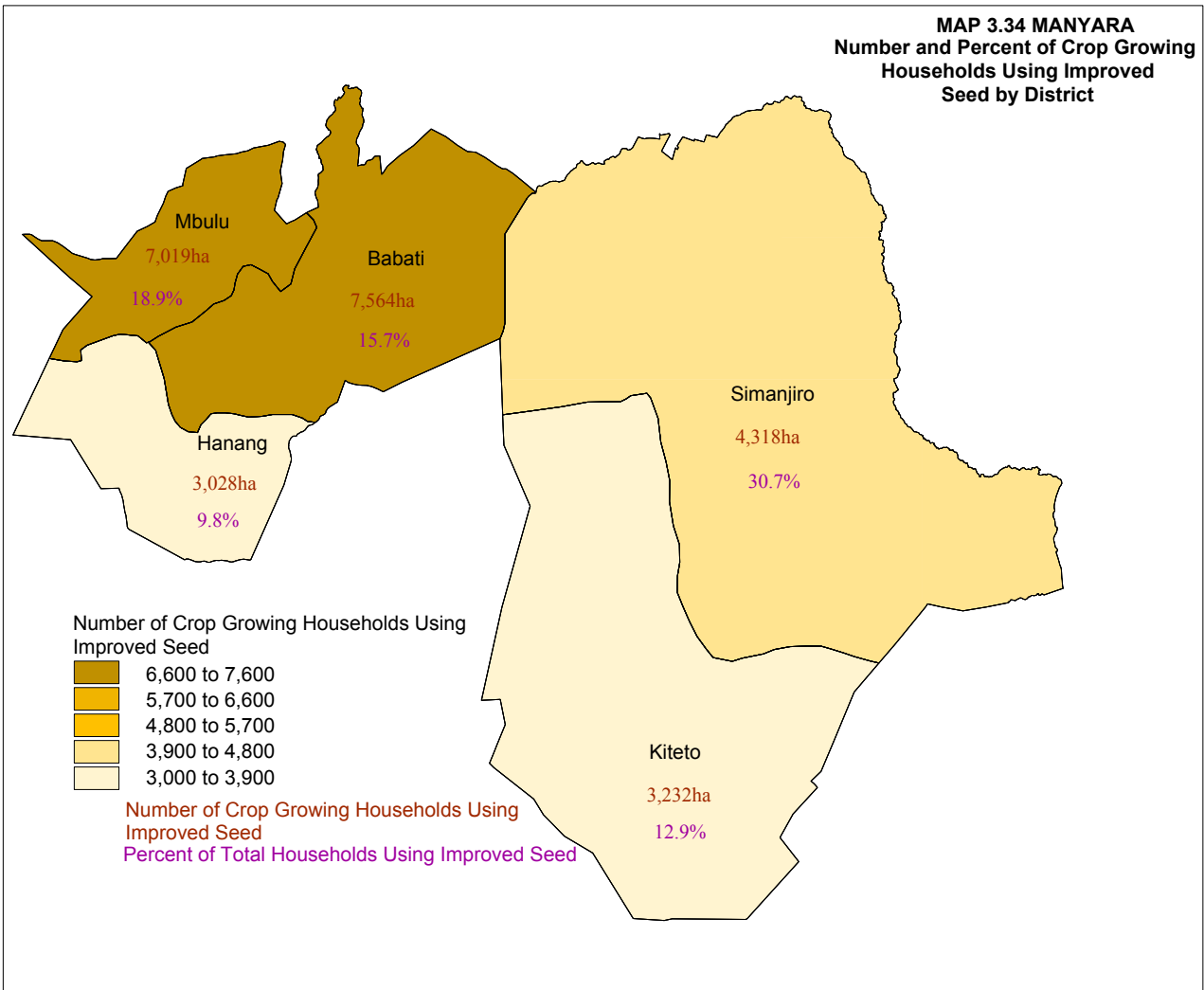
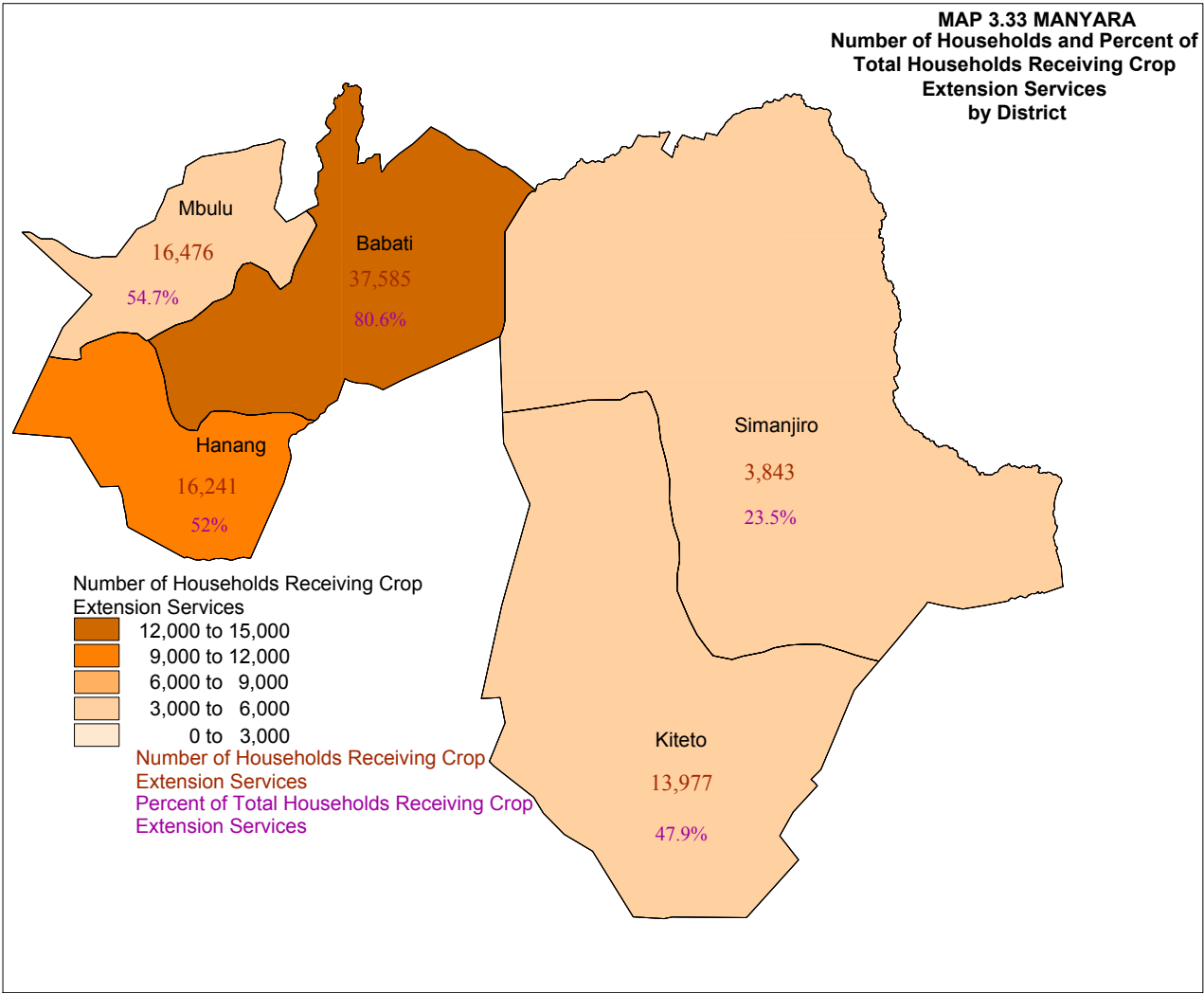
3.7.1.4 The Magnitude of Storage Loss

About 82 percent of households that stored crops had little or no loss, followed by households with up to a quarter loss (13%), household with between a quarter and a half loss (3%) and household with more than a half loss (2%) (Table 3.10).

The proportion of households that reported a loss of more than a quarter was greatest for maize (5.3% of the total number of households that stored crops). This was followed by sorghum and millets (5.2%) and beans and pulses (2.2%).

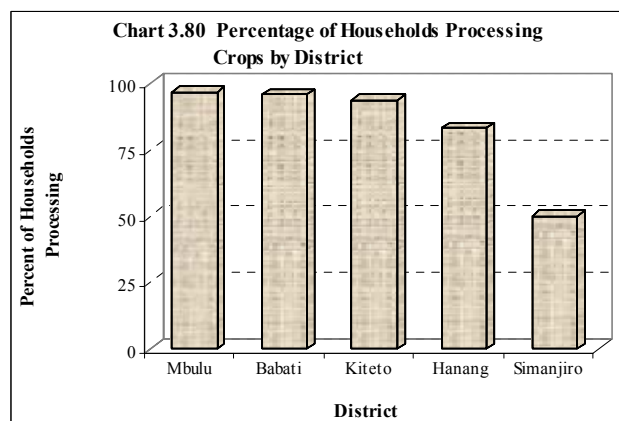
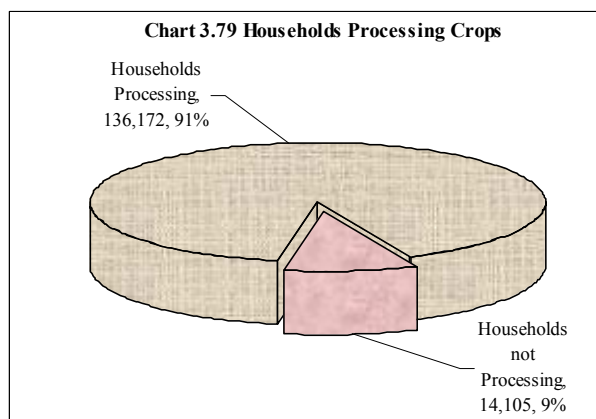
Table 3.10: Number of Households Storing Crops by Estimated Storage Loss and District

District	Estimate Storage Loss				Total
	Little or no Loss	Up to 1/4 Loss	Between 1/4 and 1/2 Loss	Over 1/2 Loss	
Babati	34,324	6,173	1,431	719	42,646
Hanang	17,621	3,850	929	1,481	23,881
Mbulu	23,547	2,388	833	257	27,025
Simanjiro	6,182	515	125	38	6,860
Kiteto	19,252	3,039	434	116	22,840
Total	100,924	15,964	3,753	2,611	123,252



3.7.2 Agro - processing and By-products

Agro - processing refers to a process that converts a crop product from one form to another in order to add value or increase the palatability of the product. Agro-processing was practiced in most crop growing households in Manyara region (136,172 households, 91% of the total crop growing households) (Chart 3.79).



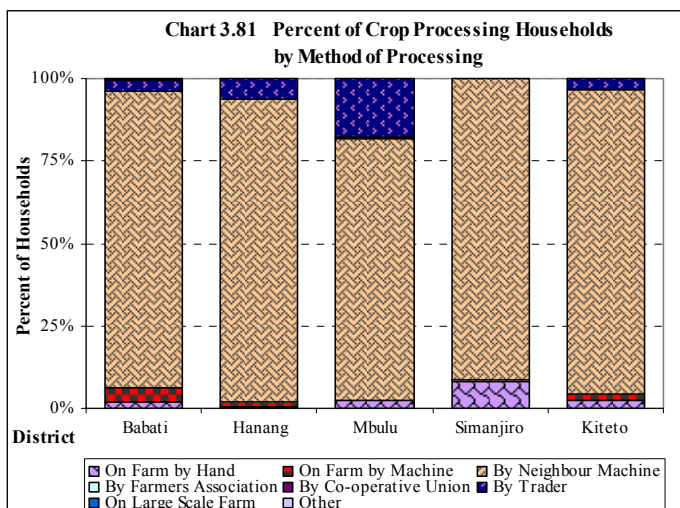
The percent of households processing crops was very high in most districts (above 80%). Simanjiro had the lowest percent of households processing crops (50% of crop growing households in the region) (Chart 3.80).

3.7.2.1 Processing Methods

Most crop processing households in Manyara region processed their crops using neighbour's machines (119,955 households, 88% of the crop processing households). This was followed by those processing by trader (9,842 households, 7%), on farm by machine (3,013 households, 2%) and on-farm by hand (2,962 households, 2%).

Although processing by machine was the most

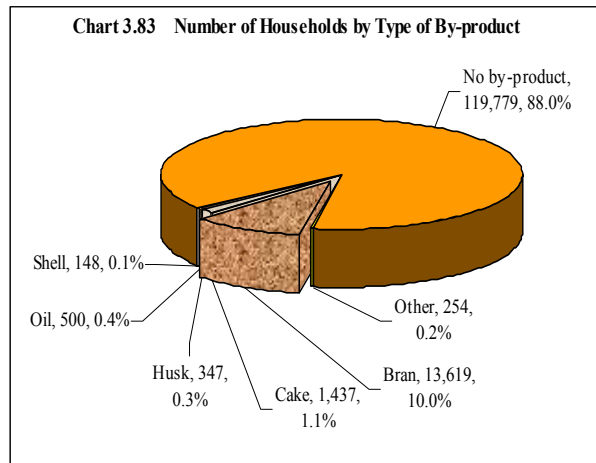
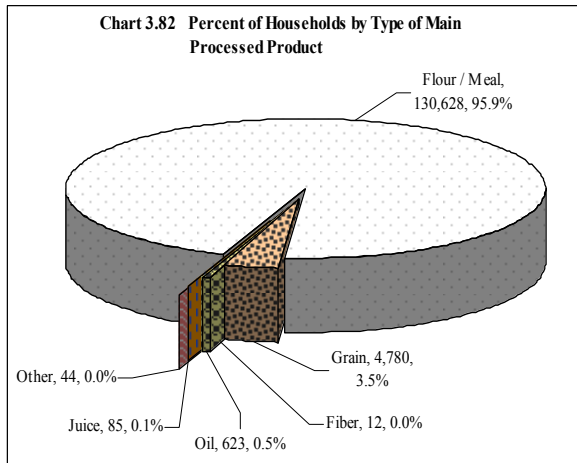
common processing method in all districts in Manyara region, however district differences existed. Simanjiro had a higher percent of households processing on farm by hand (8%), followed by Kiteto (3%) and Babati (2%). Processing by trader was more common in Mbulu and Hanang (18% and 6% respectively), whilst processing on farm by machine was more prevalent in Babati, Kiteto and Hanang (Chart 3.81).



3.7.2.2 Main Agro-processing Products

Two types of products can be produced from agro-processing namely, main product and by-product. The main product is the major product after processing and the by-product is secondary product after processing. For example the main product after processing maize is normally flour whilst the by-product is normally the bran.

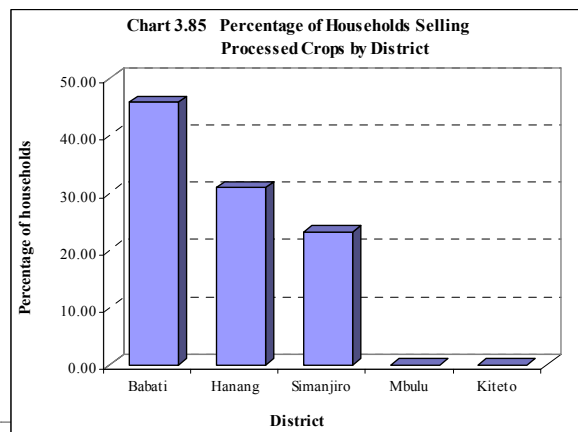
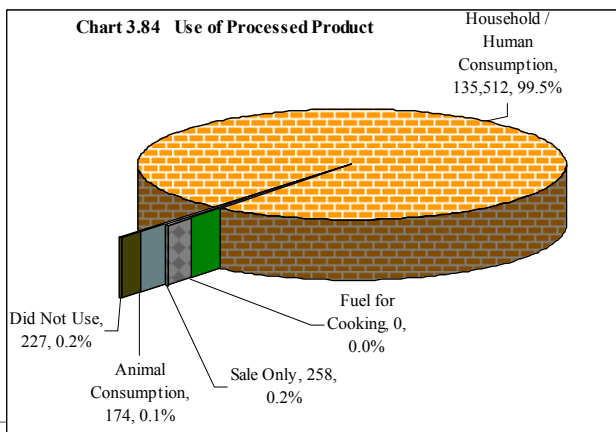
The main processed product in Manyara region was flour/meal with 130,628 households processing crops into flour (95.9%), followed by grain with 4,780 households (3.5%). The remaining products were produced by a small number of households (Chart 3.82).



The number of households producing by-products was 16,393 accounting for 12 percent of the crop processing households in Manyara region. The most common by-product produced by crop processing households was bran with 13,619 households (10.0%), followed by cake (1,437 households, 1.1%), oil (500 households, 0.4%) and husk (347 households, 0.3%). The remaining by-products were produced by 254 households constituting 0.2% of the households processing crops and no by-product were (119,779 households, 88%) (Chart 3.83).

3.7.2.3 Main Use of Primary Processed Products

Primary processed products were used for households or human consumption, for selling and for animal consumption. The most important use was for household/human consumption which represented 99.5 percent of the total households that used primary processed product (Chart 3.84). Mbulu was the only district that used primary products for animal consumption.

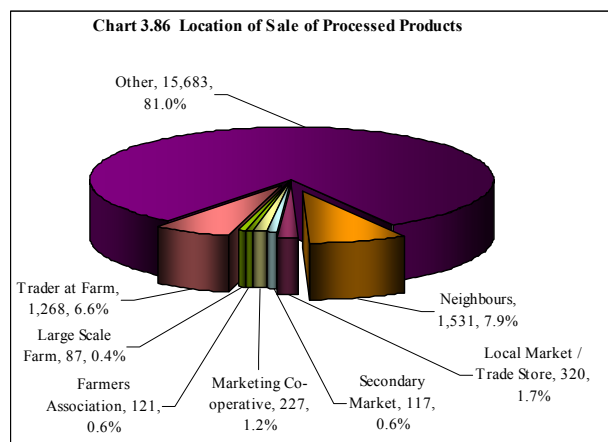


Out of 258 households that sold processed products, 118 were from Babati (45.8% of the total number of households selling processed products in the region), followed by Hanang with 80 households (31%) and Simanjiro with 60 households (23.3%) (Chart 3.85). Compared to other districts in Manyara region, Hanang and Babati had the highest percent of households that sold processed products (0.26% each). This is followed by Simanjiro (0.24%).

3.7.2.4 Outlets for Sale of Processed Products

Most households that sold processed products sold to neighbours (1,531 households, 7.9% of households that sold crops). This was followed by selling to traders at farm (1,268 households, 6.6%), local market/trade store (320 households, 1.7%), marketing co-operatives (227 households, 1.2%), farmers association (121 households, 0.6%), secondary market (117 households, 0.6%) and large scale farm (87 households, 0.4%) (Chart 3.86).

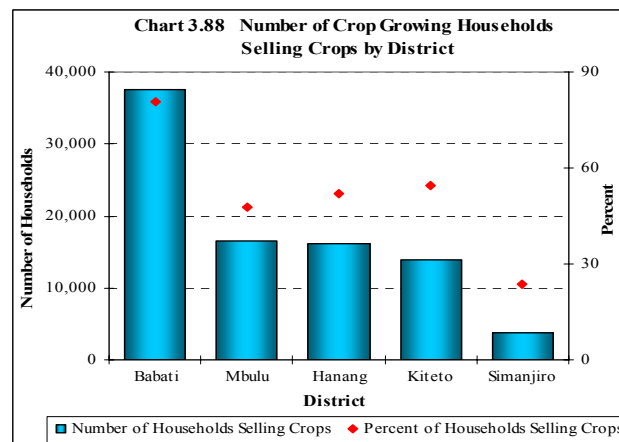
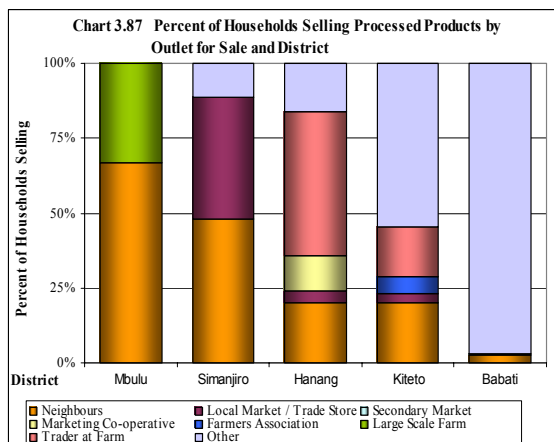
There were large differences between districts in the proportion of households selling processed products to neighbours with Mbulu district having the largest percent of households in the district selling to neighbours (66.6%), whereas Babati had only 2.4 percent. Simanjiro had the highest percent of households relying on local market/trade store than other outlets.



Compared to other districts, Hanang had the highest percent of households selling processed products to trader at farm, followed by Kiteto. The districts that had the highest proportion of households selling processed products to marketing cooperative was Hanang. Mbulu was the only district that sold processed products to large scale farms. In Kiteto, the sale of processed produce to farmer associations was most prominent compared to other districts.

3.7.3 Crop Marketing

The number of households that reported selling crops was 88,121 which represent 58.6 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Babati (81%) followed by Kiteto (55%), Hanang (52%), Mbulu (48%), and Simanjiro (23%) (Chart 3.88 and Map 3.31).



3.7.3.1 Main Marketing Problems

Low price for agricultural produce was the main marketing problem reported by households (59.3% of crop growing households that reported marketing problems). Apart from low market prices, other problems were longer distances to the markets (15.1%), no transport (11.2%), high transport costs (7.1%), lack of market information (4.8%) and no buyer (1.6%). Other marketing problems were minor and each represented less than 1 percent of the total reported problems.

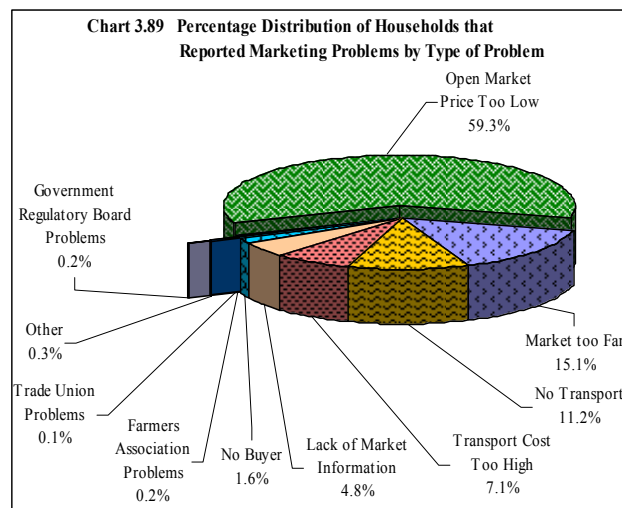


Table 3.11 Reasons for Not Selling Crop Produce

Main Reason	Household Number	%
Production Insufficient to Sell	55,673	84.6
Other	7,286	11.1
Price Too Low	1,586	2.4
Trade Union Problems	684	1.0
Co-operative Problems	379	0.6
Market Too Far	185	0.3
Government Regulatory Board Problems	75	0.1
Total	65,868	100.0

3.7.3.2 Reasons for Not Selling Crops

The main reason for not selling crops was reported as “insufficient production to sell”, representing 84.6 percent of the smallholders. The remaining reasons for not selling are in such low numbers that it is not appropriate to rank their importance (Table 3.11). This general trend applies to all districts except for Simanjiro and Hanang where the proportion of households reporting other reasons for not marketing their agricultural products is relatively high (19.4% and 7.4% respectively).

3.8 Access to Crop Production Services

3.8.1 Access to Agricultural Credit

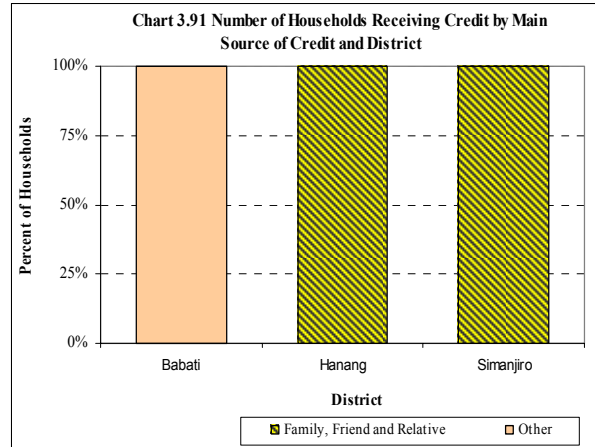
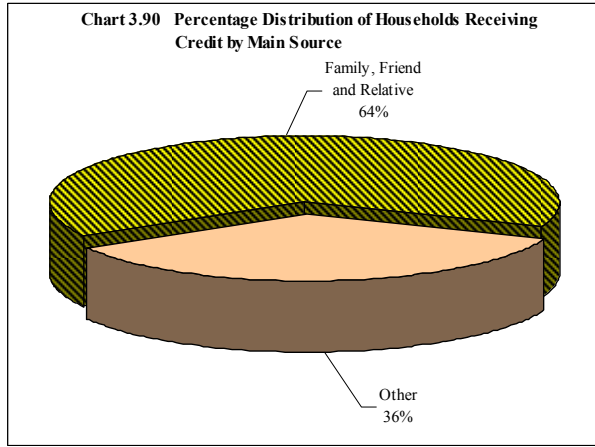
The census result shows that in Manyara region very few agricultural households (264, 0.2%) accessed credit out of which 114 (43%) were male-headed households and 150 (57%) were female-headed households. In Babati district only female-headed households got agricultural credit whereas in Hanang district only male households accessed credit. In Kiteto and Mbulu districts both male and female-headed households had no access to agricultural credit (Table 3.12).

Table 3.12 Number of Agricultural Households that Received Credit by Sex of Household Head and District

District	Male		Female		Total
	Number	%	Number	%	
Babati	0	0	94	100	94
Hanang	74	100	0	0	74
Simanjiro	41	42	56	58	97
Kiteto	0	0	0	0	0
Mbulu	0	0	0	0	0
Total	114	43	150	57	264

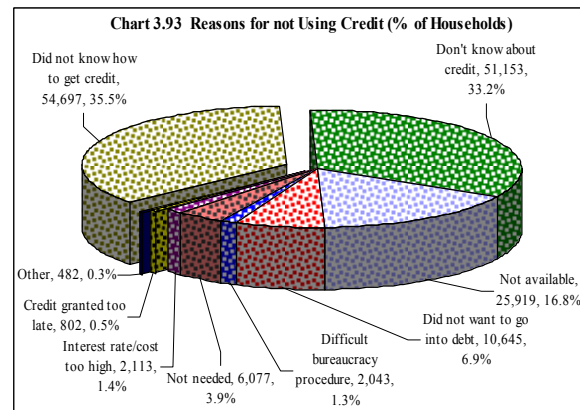
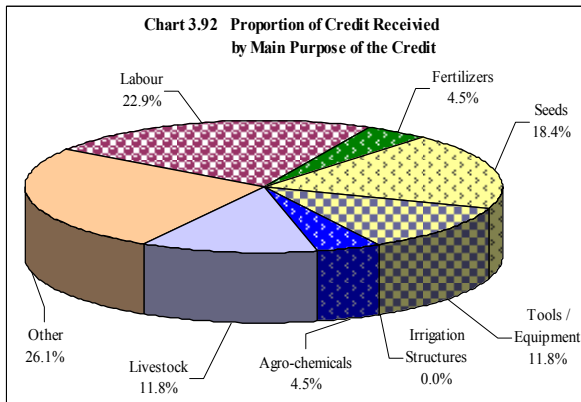
3.8.1.1 Source of Agricultural Credit

The major agricultural credit providers in Manyara region were family, friends and relatives which collectively provided credit to 170 agricultural households (64% of the total number of households that accessed credit). However 94 households (36%) received agriculture credit from other sources (Charts 3.90 and 3.91).



3.8.1.2 Use of Agricultural Credit

A large proportion of the agricultural credit provided to agricultural households in the region were used on unspecified activities (26.1%), followed by hiring labour (22.8%), purchase seeds (18.4%), tools and equipments (11.8%) and livestock rearing (11.8%). The proportion of credits intended to be used to purchase fertilizers and agro-chemicals was very low (Chart 3.92).



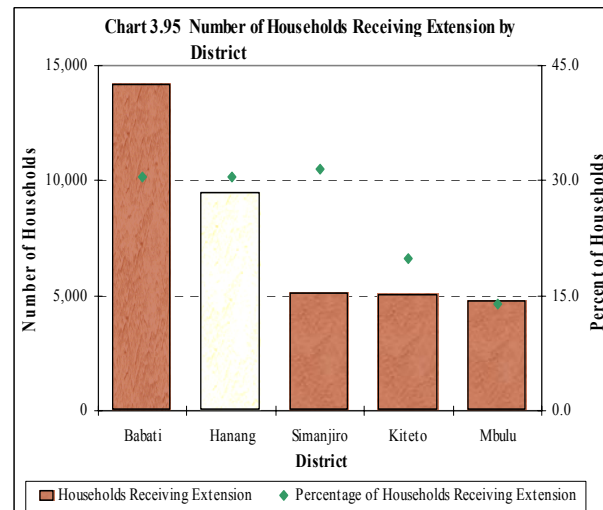
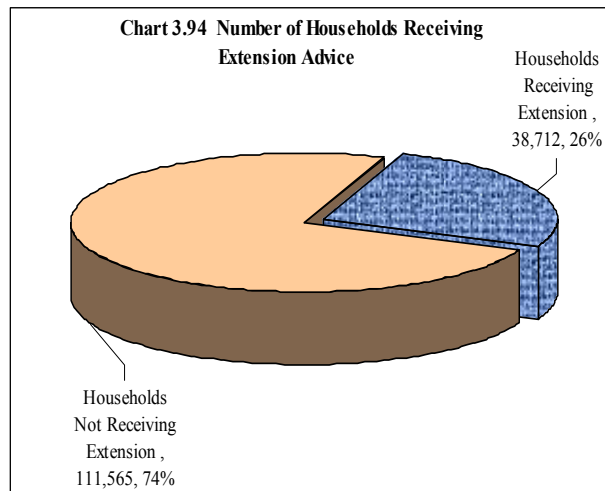
3.8.1.3 Reasons for Not Using Agricultural Credit

The main reason for not using agricultural credit as a source of finance was little awareness accounting to 68.8 percent of the agricultural households (“did not know how to get credit” and “don’t know about credit”). This was followed by households reporting the un-availability of credit (16.8%) and “not wanting to go into debt” (6.9%). The rest of the reasons collectively accounted for 7.5 percent of the households not using credit.

3.8.2 Crop Extension

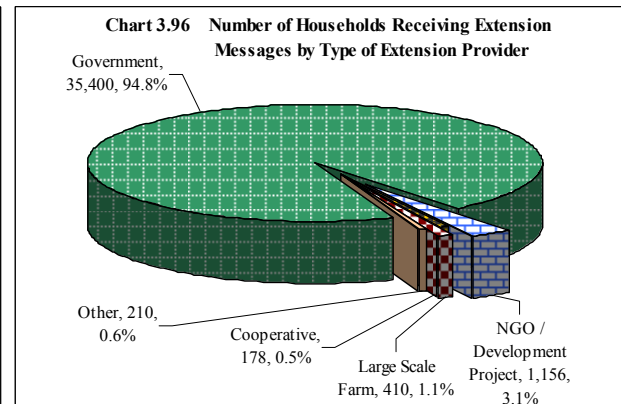
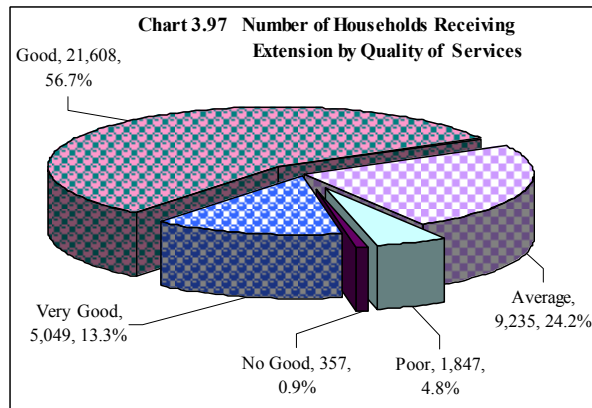
The number of Agricultural households that received crop extension was 38,712 (26% of total crop growing households in the region) (Chart 3.94). Some districts had more access to extension services than others, with Simanjiro having a

relatively high proportion of households (31.5%) that received crop extension messages in the district, followed by Babati (30.5%), Hanang (30.4%), Kiteto (19.8%) and Mbulu (13.9%) (Chart 3.95 and Map 4.32).



3.8.2.1 Sources of Crop Extension Messages

Of the households receiving extension advice, the Government provided the greatest proportion (94.8%, 35,400 households). NGOs provided 3.1 percent, large scale farms 1.1 percent and the remaining sources provided less than 1 percent (Chart 3.96). However, district differences existed with the proportion of the households receiving advice from government services ranging from 80.5 percent in Kiteto district to 98.24 percent in Mbulu and Hanang.



3.8.2.2 Quality of Extension

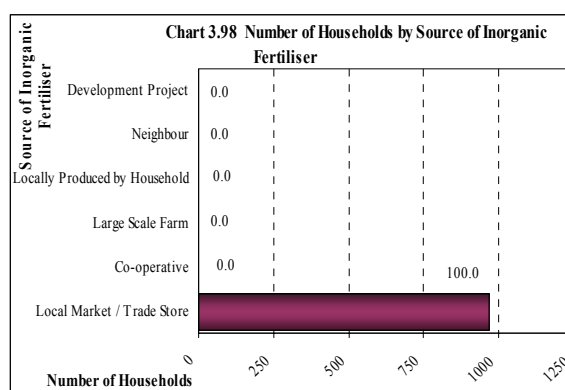
An assessment of the quality of extension indicates that 56.7 percent of the households receiving extension ranked the service as being “good”, followed by “average” (24.2 %), “very good” (13.3%), “poor” (4.8%) and “no good” (0.9%) (Chart 3.97). However, care should be exercised when making decisions on quality of extension and also other variables in the extension report as all the enumerators were extension agents and some degree of bias can be expected.

3.9 Access to Inputs

Access to inputs in this section refers to all crop growing households in Manyara regardless of whether the household grew annual or permanent crops. In previous sections the reference was on annual crops only. Because of this, some of the figures presented in this section may be slightly different from the previous section on inputs use (Section 3.5). Data on source of inputs is only found in this section and it applies to both annual and permanent crops.

Type of Input	Households With Access to Input		Households Without Access to Inputs	
	Number	%	Number	%
Farm Yard Manure	58,519	38.9	91,759	61.1
Improved Seeds	20,492	13.6	129,785	86.4
Insecticides/Fungicide	9,252	6.2	141,025	93.8
Compost	3,434	2.3	146,843	97.7
Inorganic Fertiliser	969	0.6	149,309	99.4
Herbicide	1,691	1.1	148,587	98.9

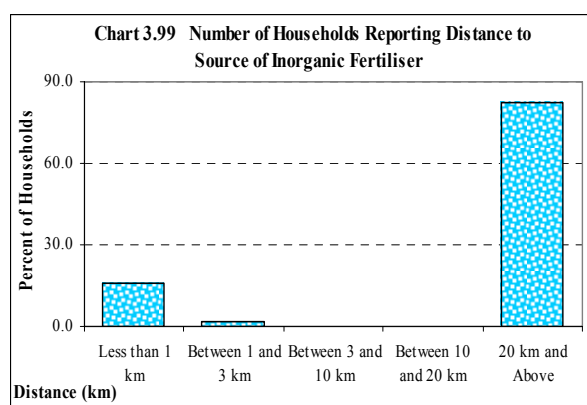
A small number of households use inputs and this is particularly true of inputs that are not produced on farm i.e., improved seeds, fungicides, inorganic fertiliser and herbicides. In Manyara region farm yard manure was used by 58,519 households which represent 39 percent of the total number of crop growing households. This is followed by households using improved seeds (13.6%), insecticides/fungicide (6.2%), compost (2.3%), herbicide (1.1%) and inorganic fertiliser (0.6%), (Table 2.13).



3.9.2 Inorganic Fertilisers

Smallholders that used inorganic fertiliser in Manyara mainly purchased them from the local market/trade store (100% of the total number of inorganic fertiliser users) (Chart 3.98).

Access to inorganic fertiliser was mostly over 20 km involving 82.1 percent of households using inorganic fertilizers, followed by less than 1 km (16%) and between 1 km and 3 km (1.9%) (Chart 3.99). Due to the very small number of households using inorganic fertilizers coupled with the small number of households responding to “not available” (20%) as the reason for not using, it may be assumed that access to inorganic fertilizers is not the main reason for not using them. Other reasons such as cost are more important with 50 percent of households responding to cost factors as the main reason for not using them. In other words, it may be assumed that if the cost was affordable the demand would be higher and access to inorganic fertiliser would be made more available.

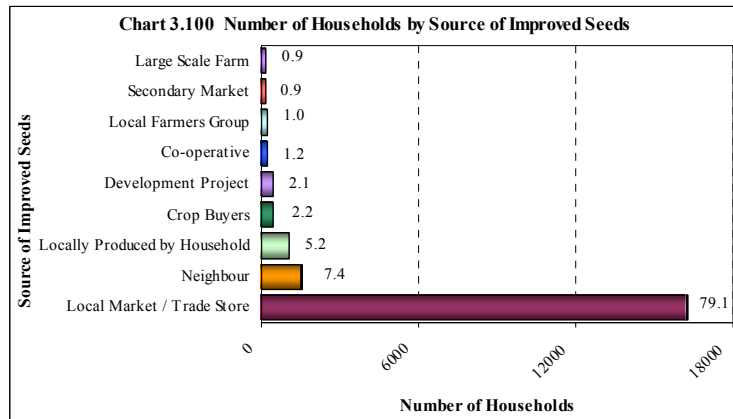


Due to the very small number of households using inorganic fertilizers coupled with the small number of households responding to “not available” (20%) as the reason for not using, it may be assumed that access to inorganic fertilizers is not the main reason for not using them. Other reasons such as cost are more important with 50 percent of households responding to cost factors as the main reason for not using them. In other words, it may be assumed that if the cost was affordable the demand would be higher and access to inorganic fertiliser would be made more available.

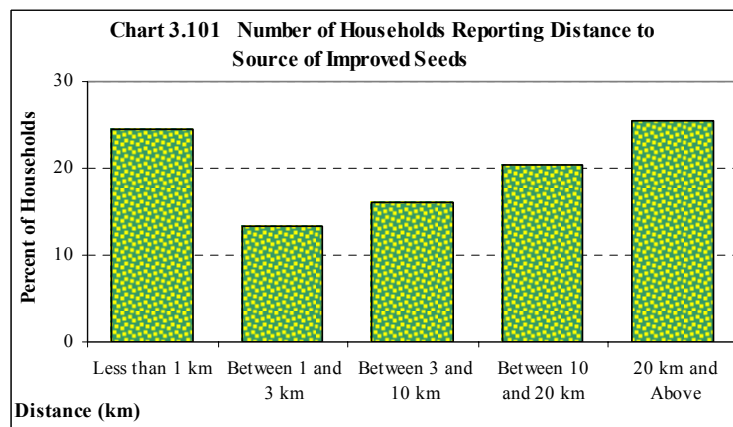
The only districts that had households using inorganic fertilizers were Simanjiro and Hanang with 4 percent and 1 percent of the households respectively.

3.9.3 Improved Seeds

The percent of households that used improved seeds was 13.6 percent of the total number of crop growing households. Most of the improved seeds were from the local market/trade store (79.1%), followed by neighbours (7.4%), locally produced (5.2%). Other less important sources of improved seed were from crop buyers (2.2%), development projects (2.1%), cooperatives (1.2%), local farmers group (1.0%), secondary market (0.9%) and large farms (0.9%) (Chart 3.100).



Access to improved seeds was better than access to chemical inputs with 25 percent of households obtaining the input within 1 km of the household (Chart 3.101). This is in line with the higher use of improved seed compared to other chemical inputs, which further supports the concept that it is not the availability that is the main issue in the use of inputs but rather other factors such as cost.



The districts that mostly use improved seeds were Babati (33.5 percent of the total number of households using improved seeds in Manyara region), followed by Mbulu (24%), Simanjiro (18%), Kiteto (13%) and Hanang (9.4%) (Map 3.33).

3.9.4 Insecticides and Fungicide

Most smallholder households using insecticides and fungicides mainly purchase them from local markets/trade stores (88.2% of the total number of insecticide/fungicide users). Other sources of insecticides/fungicides were of minor importance (Chart 3.102).

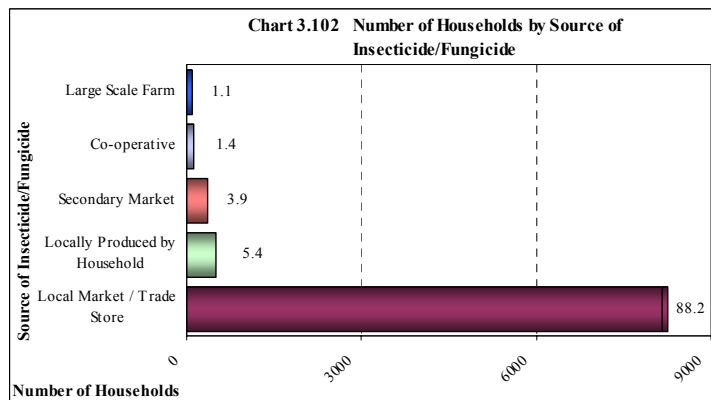
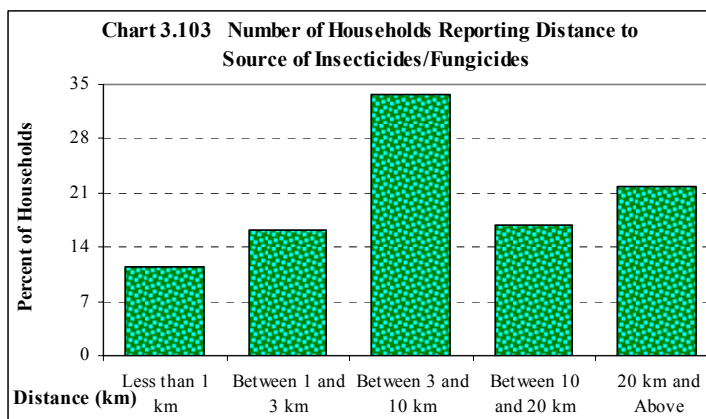
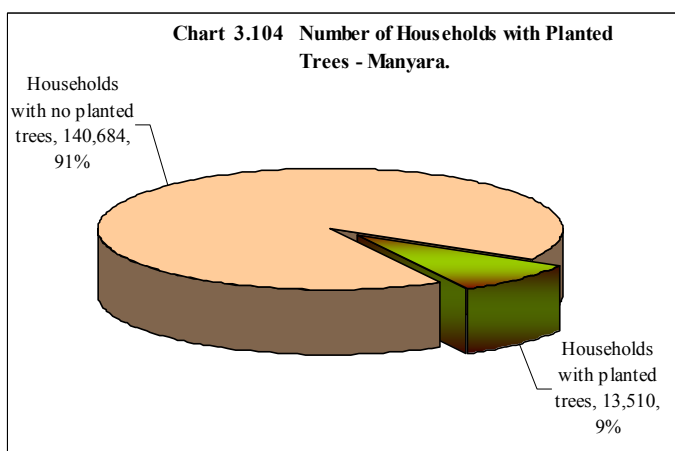


Chart 3.103 shows that there is no distinct pattern for the number of households with varying distances from the source of insecticide/fungicide. The small number of households using insecticides/fungicides coupled with the 8 percent of households responding to “not available” as the reason for not using it may be assumed that access is not the main reason for not using. Other reasons such as cost are more important with 61 percent of households responding to cost factors as the main reason for not using. In other words, it may be assumed that if the cost was affordable, the demand would be higher and access to insecticides/fungicides would be made more available. Fungicide were used more in Simanjiro district (23.8 percent of the total number of households that used insecticide/fungicides in the region), followed by Babati (23.12%), Hanang (23.07%), Kiteto (19.6%) and Mbulu (10.4%).



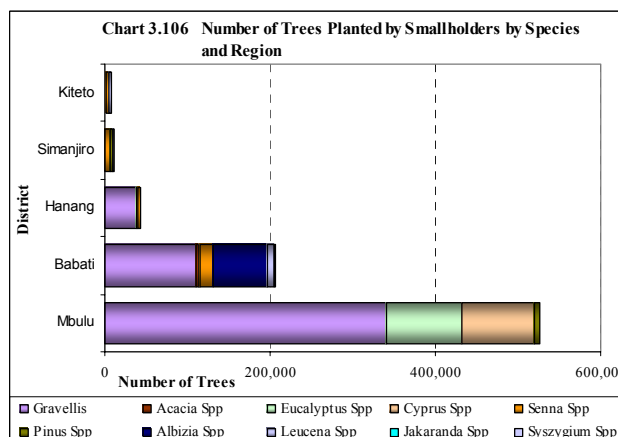
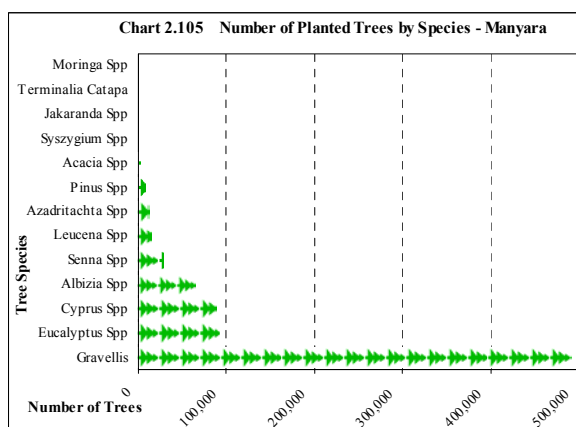
3.10 Tree Planting

The number of households involved in tree farming was 13,510 representing 9 percent of the total number of agriculture households (Chart 3.104).

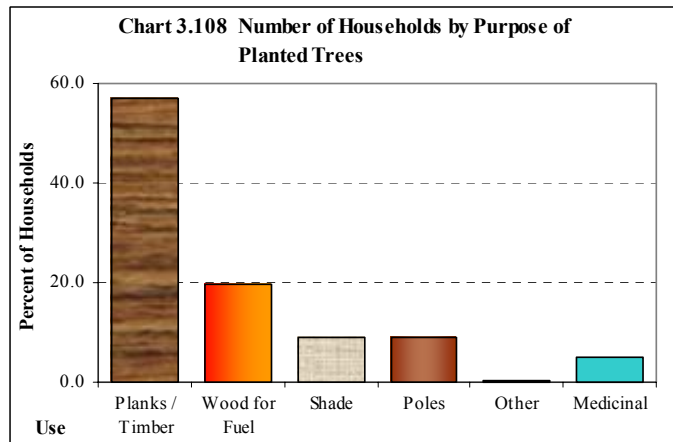
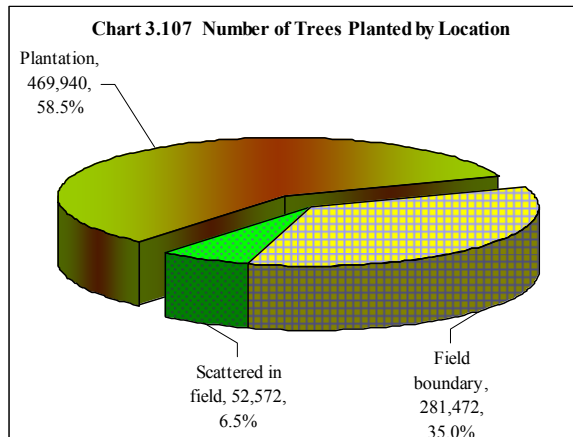


The number of trees planted by smallholders on their allotted land was 806,488 trees. The average number of trees planted per planting tree household was 60 trees.

The main species planted by smallholders is *Gravellia spp* (493,306 trees, 61%), followed by *Eucalyptus spp* (94,871, 12%), then *Cyprus* (87,820, 11%) and *Albizia spp* (64,356 trees, 8%). The remaining trees species are planted in comparatively small numbers (Chart105).



Mbulu had the largest number of smallholders with planted trees than any other district (65.2%) and the trees were dominated by *Gravellia* species. This was followed by Babati (25.7%) where the trees were dominated by *Gravellia* and to a lesser extent *Albizia*, then Hanang (5.5%), Simanjiro (2.5%) and Kiteto (1.1%) which were mainly planted with *Gravellia*, *Azadirachta* species and *Senna* species respectively (Chart 3.106 and Map 3.34).



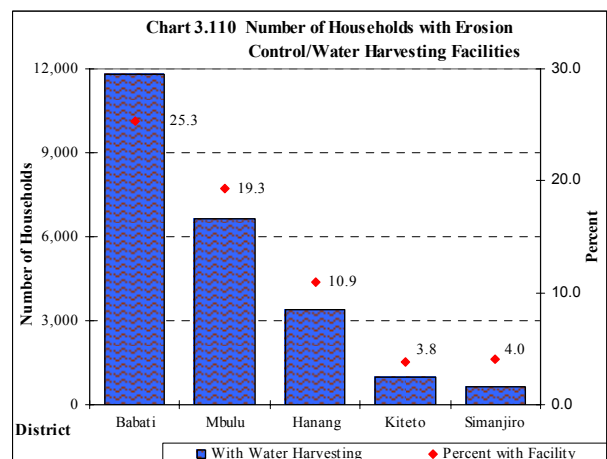
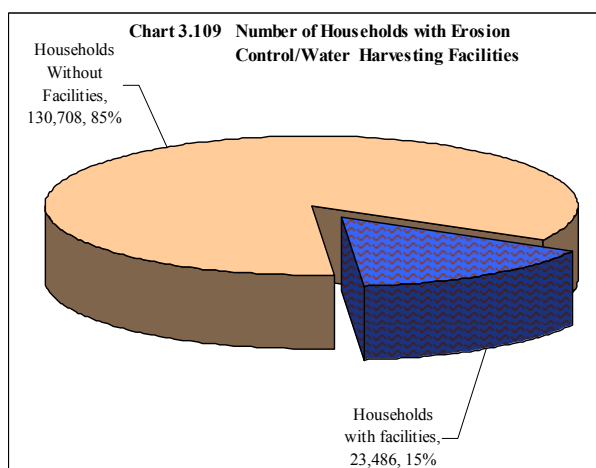
Smallholders mostly plant trees on plantations. The proportion of households that plant on plantations was 58.5 percent, followed by field boundaries (35%) and then trees planted scattered in the field (6.5%) (Chart 3.107).

The main purpose of planting trees was to obtain planks/timber (57.1%). This is followed by wood for fuel (19.6%), poles (9.1%), shade (9.0%) and medicinal (4.9%) and other purposes (90.3%) (Chart 3.108).

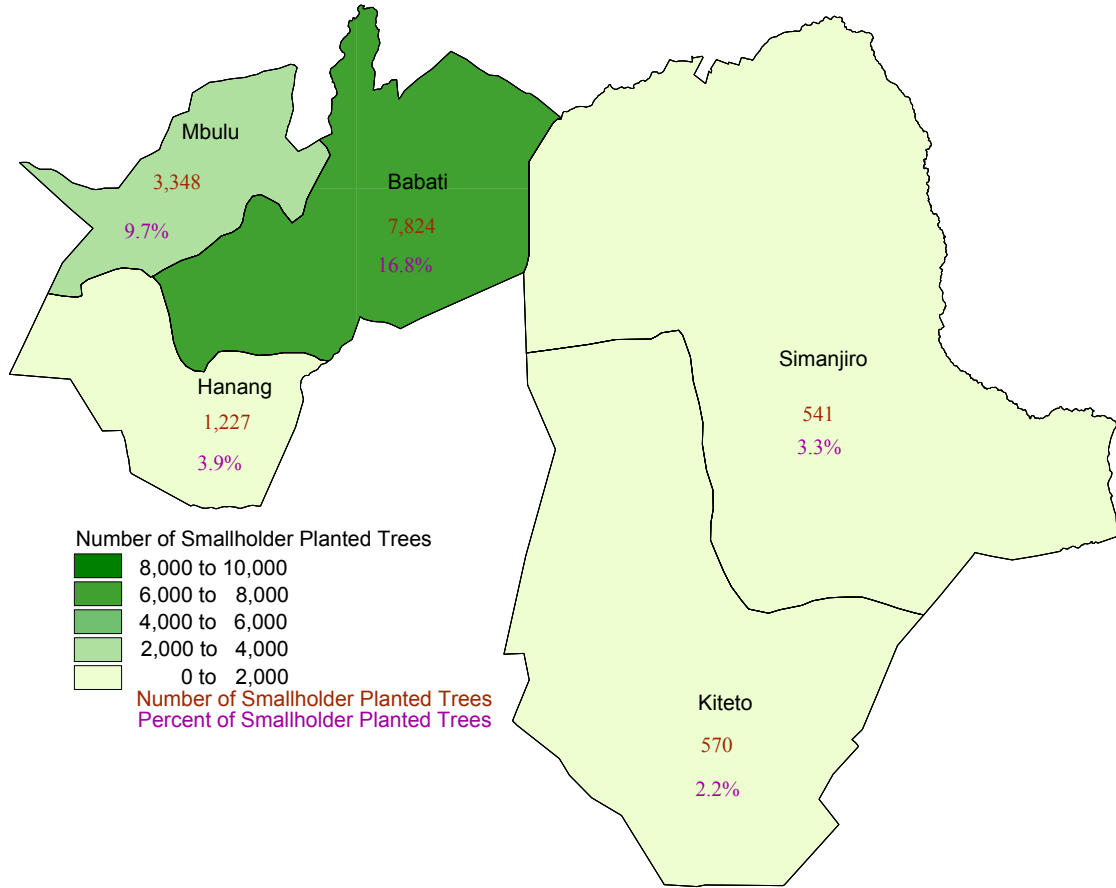
3.11 Irrigation and Erosion Control Facilities

Erosion control and water harvesting facilities are grouped together as they normally have dual purposes of reducing erosion and increasing the amount of water available for crop production.

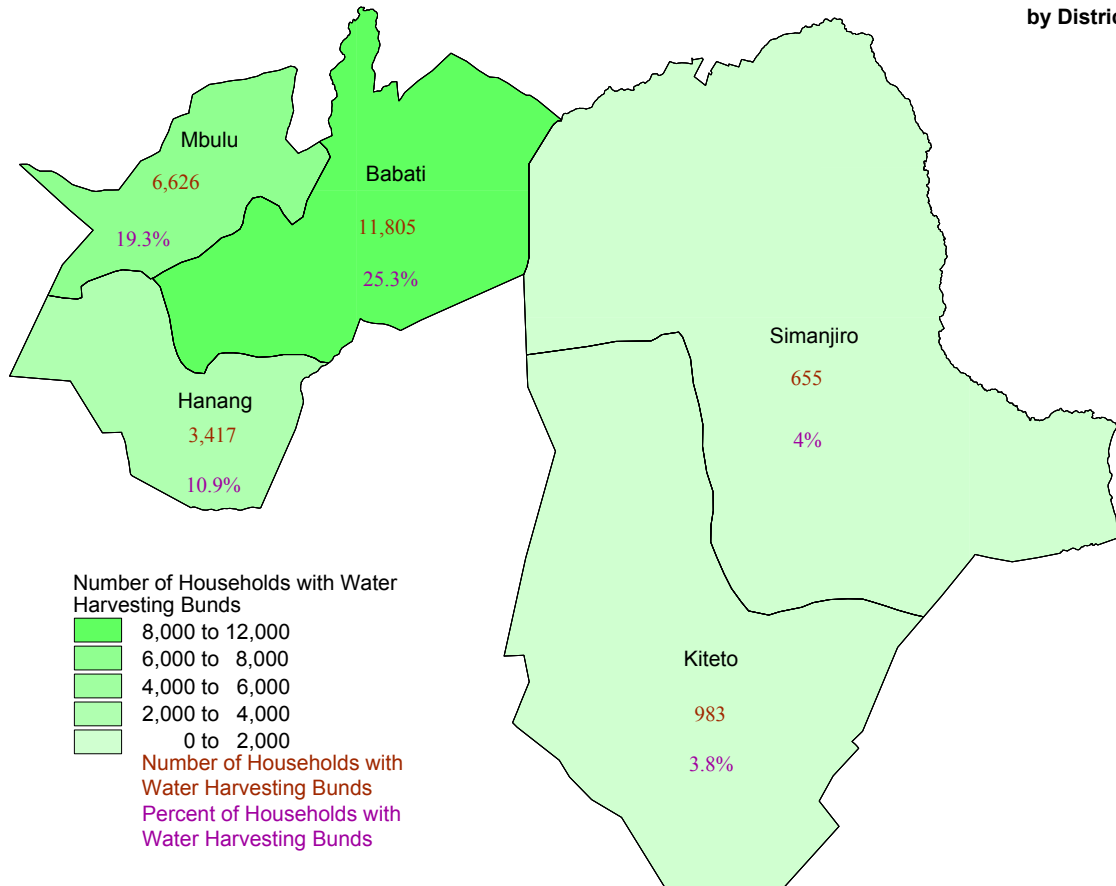
The number of agricultural households that had soil erosion and water harvesting facilities on their farms was 23,486 which represents 15 percent of the total number of agricultural households in the region (Chart 3.109).



MAP 3.35 MANYARA
Number and Percent of Smallholder
Planted Trees by District

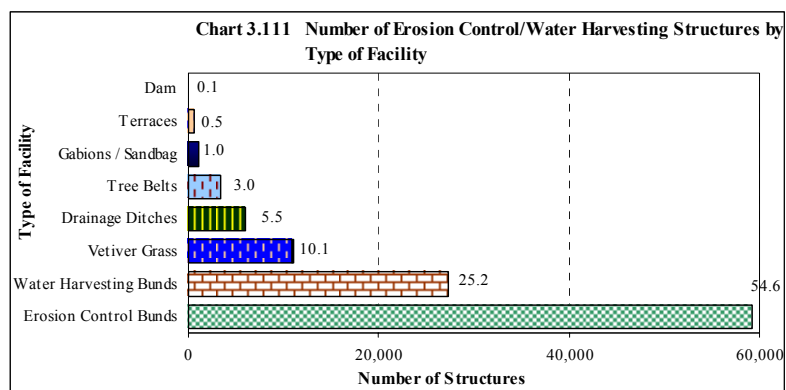


MAP 3.36 MANYARA
Number and Percent of Households
with Water Harvesting Bunds
by District



The proportion of households with soil erosion control and water harvesting facilities was highest in Babati district (25.3%) followed by Mbulu (19.3%), Hanang (10.9%), Simanjiro (4.0%) and Kiteto (3.8%) (Chart 3.110). Erosion control bunds accounted for 54.6 percent of the total number of structures, followed by water harvesting bunds (25.2%), vetiver grass (10.1%), drainage ditches (5.5%), tree belts (3.0%), gabions/sandbags (1.0%), terraces (0.5%) and dams (0.1%) (Chart 3.111 and Map 3.35).

Erosion control bunds, water harvesting bunds and vetiver grass together had 97,481 structures. This represented 90 percent of the total structures in the region. The remaining 10 percentages were shared among the rest of the erosion control methods mentioned above.



Babati and Mbulu districts had 84,511 erosion control structures (78 percent of the total erosion structures in the region).

3.12 LIVESTOCK RESULTS

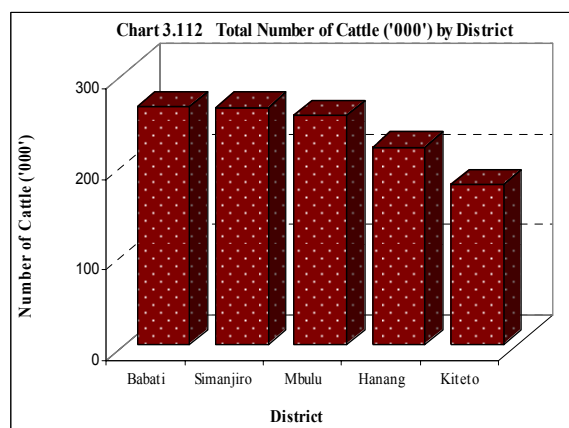
3.12.1 Cattle Production

The total number of cattle in the region was 1,177,951. Cattle was the dominant livestock type in the region, followed by goats, sheep and pigs. The region had 7.2 percent of the total cattle population on Tanzania Mainland.

3.12.1.1 Cattle Population

The number of indigenous cattle in Manyara region was 1,163,051 (98.7 % of the total number of cattle in the region), 13,761 cattle (1.2%) were dairy breeds and 1,139 cattle (0.001%) were beef breeds.

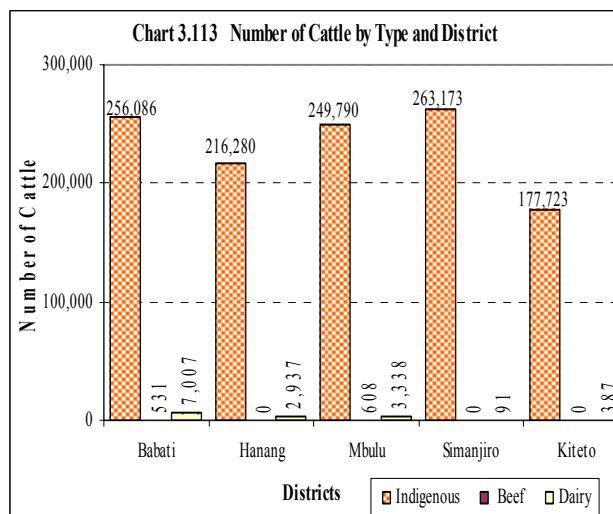
The census results show that 89,747 agricultural households in the region (58.2% of total agricultural households) kept 1.2 million cattle. This was equivalent to an average of 13 heads of cattle per cattle-keeping-household. The district with the largest number of cattle was Babati which had about 263,625 cattle (22.4% of the total cattle in the region). This was followed by Simanjiro (263,264 cattle, 22.3%), Mbulu (253,735 cattle, 21.5%), Hanang (219,217 cattle, 18.6%) and Kiteto (178,110 cattle, 15.1%) (Chart 3.112 and Map 3.36). However, Mbulu district had the highest density (209 head per km^2) (Map 3.37).



Although Babati district had the largest number of cattle in the region, most of it was indigenous. The number of dairy cattle in the district was very small, though it was the largest in the region. The number of beef cattle was insignificant (Chart 3.113).

3.12.1.2 Herd Size

Thirty percent of the cattle-rearing households had herds of size 1-5 cattle with an average of three cattle per household. Herd sizes of 6-30 accounted for about 64 percent of all cattle in the region. Only 5 percent of the cattle rearing households had herd sizes of 31- 100 cattle. About 94 percent of total cattle rearing households had herds of size 1-30 cattle and owns 67.6 percent of total cattle in the region, resulting in an average of 9 cattle per cattle rearing household. There were about 381 households with a herd size of more than 151 cattle each (88,495 cattle in total) resulting in an average of 232 cattle per household.

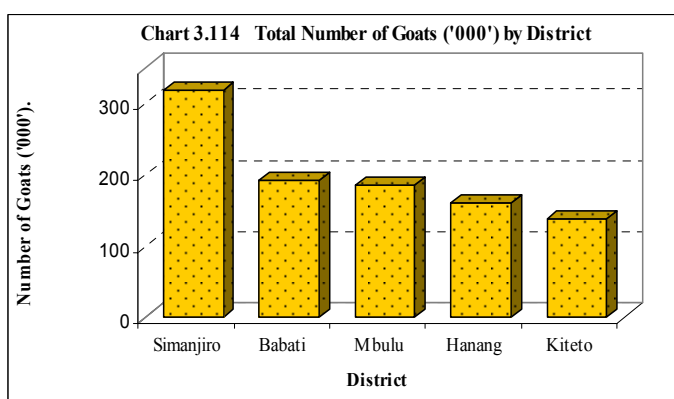


3.12.2. Goat Production

Goat rearing was the second most important livestock keeping activity in the region, followed by sheep and pig rearing. In terms of total number of goats on the Mainland, Manyara region ranked 3 out of the 21 regions with 8.4 percent of the total goats on the Mainland.

3.12.2.1 Goat Population

The number of goat-rearing-households in Manyara region was 80,558 (52% of all agricultural households in the region) with a total of 991,152 goats giving an average of 12 head of goats per goat-rearing-household. Simanjiro had the largest number of goats (317,648 goats, 32% of all goats in the region), followed by Babati (191,163 goats, 19.3%), Mbulu (184,256 goats, 18.6%), Hanang (160,469 goats, 16.2%) and Kiteto (137,616 goats, 13.9%) (Chart 3.127 and Map 3.38). However Mbulu district had the highest density (152 head per km²) (Map 3.39).



3.12.2.2 Goat Herd Size

Thirty percent of the goat-rearing households had herd size of 1-4 goats with an average of 3 goats per goat rearing household. Seventy seven percent of total goat-rearing households had herd size of 1-14 goats and owned 39 percent of the total goats in the region resulting in an average of 6 goats per goat-rearing households. The region had 3,270 households (4%) with herd sizes of 40 or more goats each (270,730 goats in total), resulting in an average of 83 goats per household.

3.12.2.3 Goat Breeds

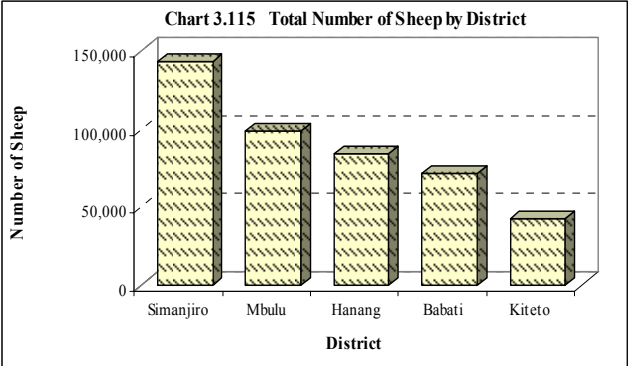
Goat husbandry in the region was dominated by the indigenous breeds that constituted 99.4 percent of the total goats in Manyara region. Improved goats for meat and diary goats constituted 0.01 and 0.56 percent of total goats respectively.

3.12.3. Sheep Production

Sheep rearing was the third most important livestock keeping activity in Manyara region after cattle and goats. The region ranked 3 out of 21 Mainland regions and had 11 percent of all sheep on Tanzania Mainland.

3.12.3.1 Sheep Population

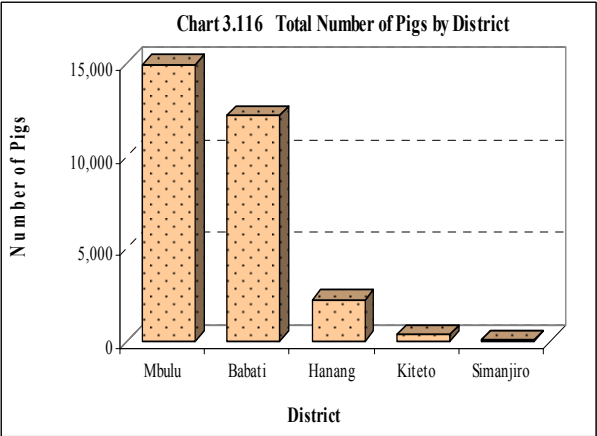
The number of sheep rearing households was 53,914 (35% of all agricultural households in Manyara region) rearing 439,314 sheep, giving an average of 8 heads of sheep per sheep rearing household. The district with the largest number of sheep was Simanjiro with 143,162 sheep (33%of total sheep in Manyara region), followed by Mbulu (98,269 sheep, 22%), Hanang (84,186 sheep, 19%), Babati (71,450 sheep, 16%) and Kiteto (42,247 sheep, 10%) (Chart 3.115 and Map 3.40). Mbulu district had the highest density (81 head per km²) (Map 3.41). Sheep rearing was dominated by indigenous breeds that constituted 99.5 percent of all sheep kept in the region. Only 0.5 percent of the total sheep in the region were improved breeds.



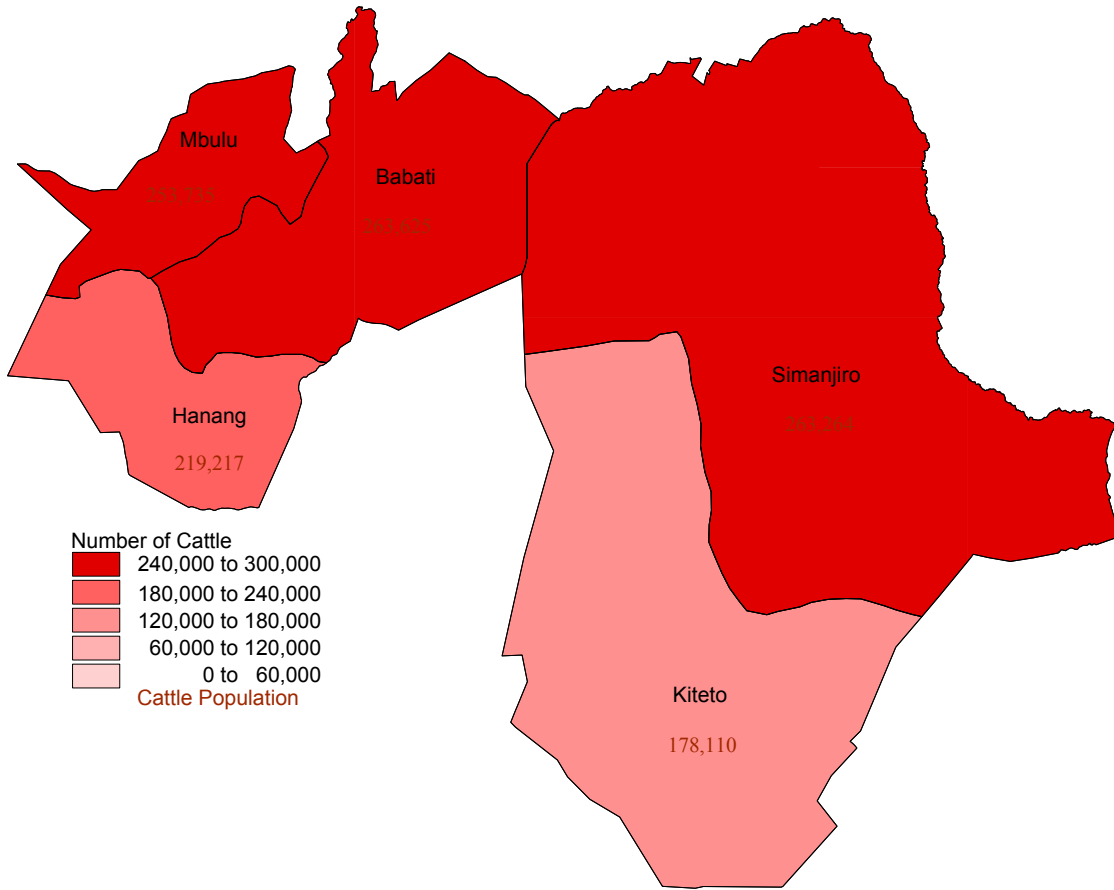
3.12.4. Pig Production

Piggery was the least important livestock keeping activity in the region after cattle, goats and sheep. The region ranks 9 out of 21 Mainland regions and had 4 percent of the Mainland total pigs.

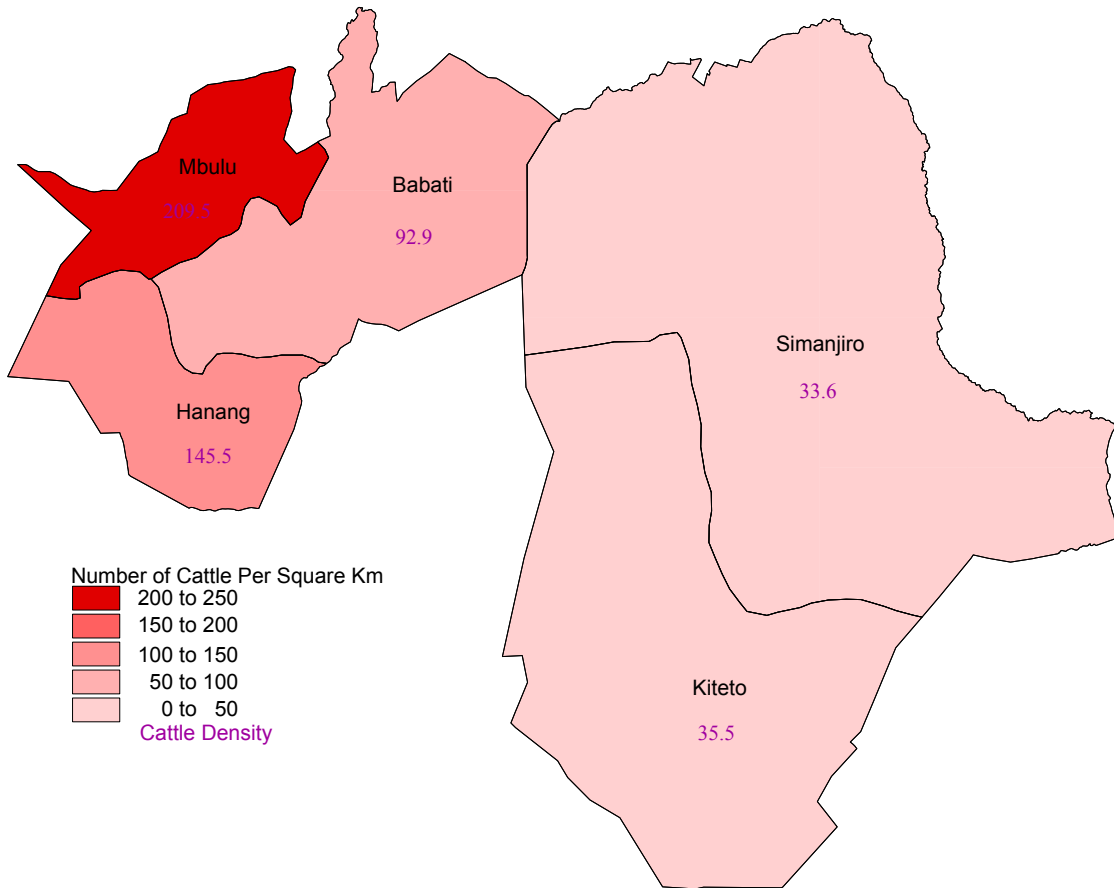
The number of pig rearing agricultural households in Manyara region was 16,210 (11% of the total agricultural households in the region) rearing 41,236 pigs. This gives an average of 3 pigs per pig-rearing household. The district with the largest number of pigs was Mbulu with 26,415 pigs (64.1% of the total pig population in the region), followed by Babati (12,254 pigs, 29.7%), Hanang (2,235 pigs, 5.4%), Kiteto (306 pigs, 0.7%) and Simanjiro (25 pigs, 0.06%) (Chart 3.116 and Map 3.42. However, Mbulu district had the highest density (21 head per km²) (Map 3.43).



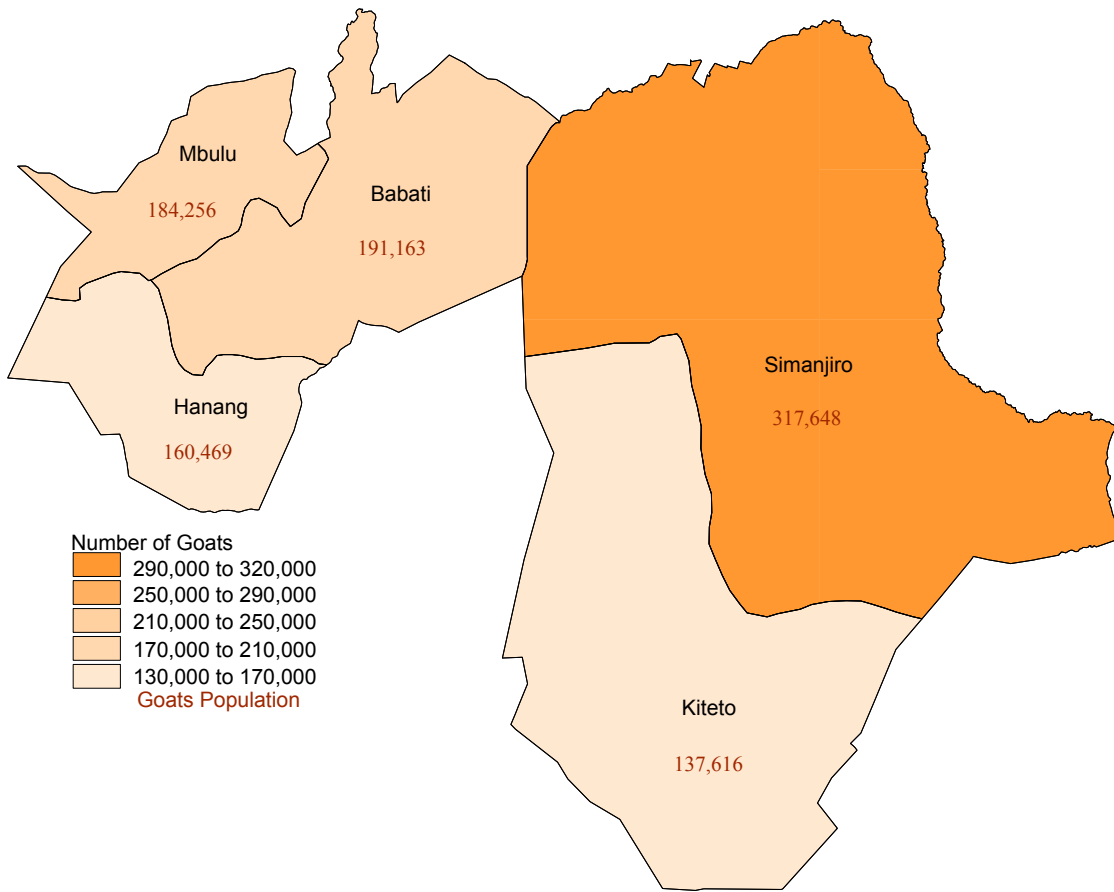
MAP 3.37 MANYARA
Cattle population by District as
of 1st Octobers 2003



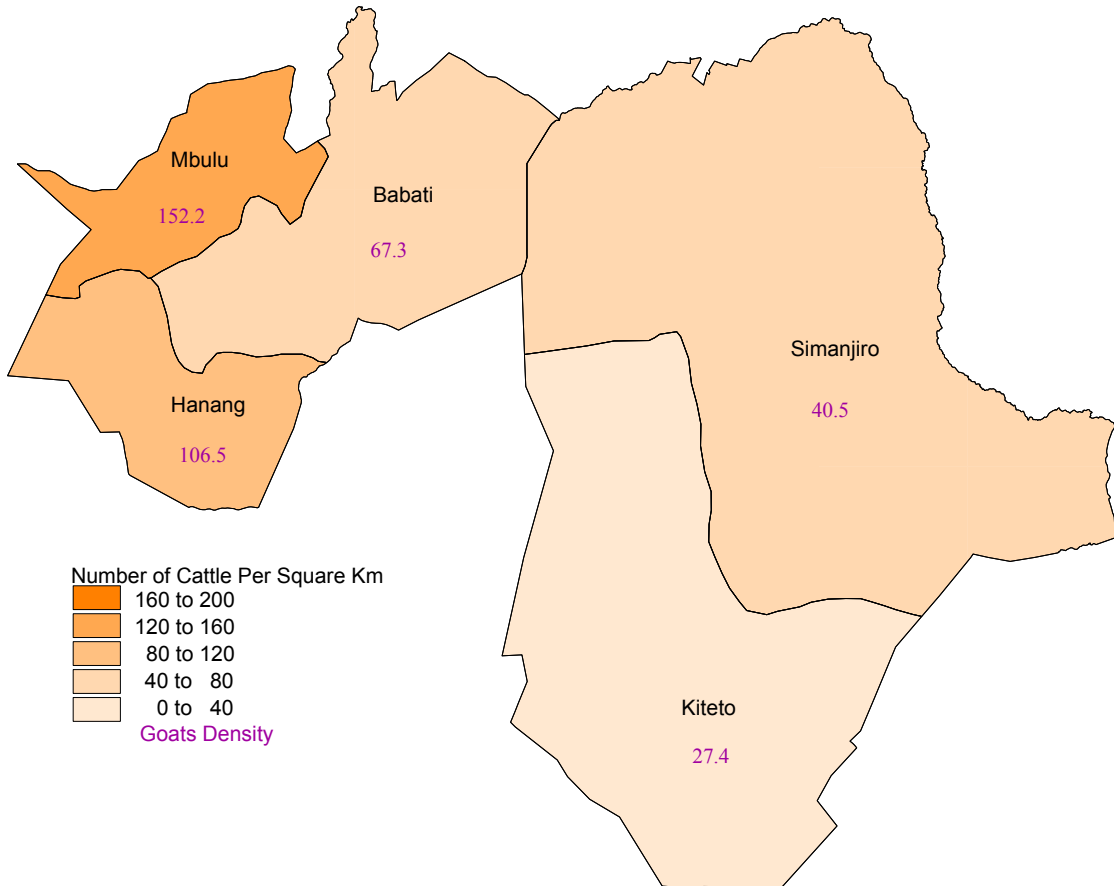
MAP 3.38 MANYARA
Cattle Density by District as
of 1st October 2003



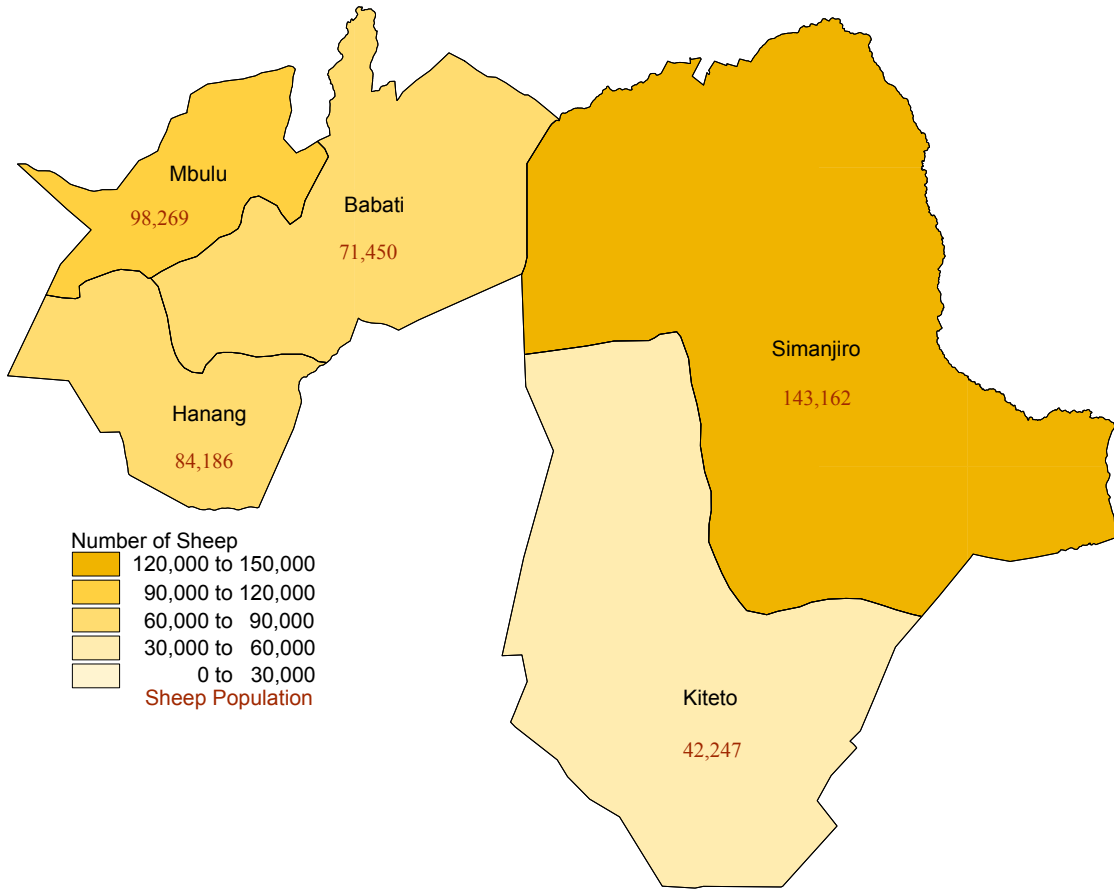
MAP 3.39 MANYARA
Goats population by District as of 1st October 2003



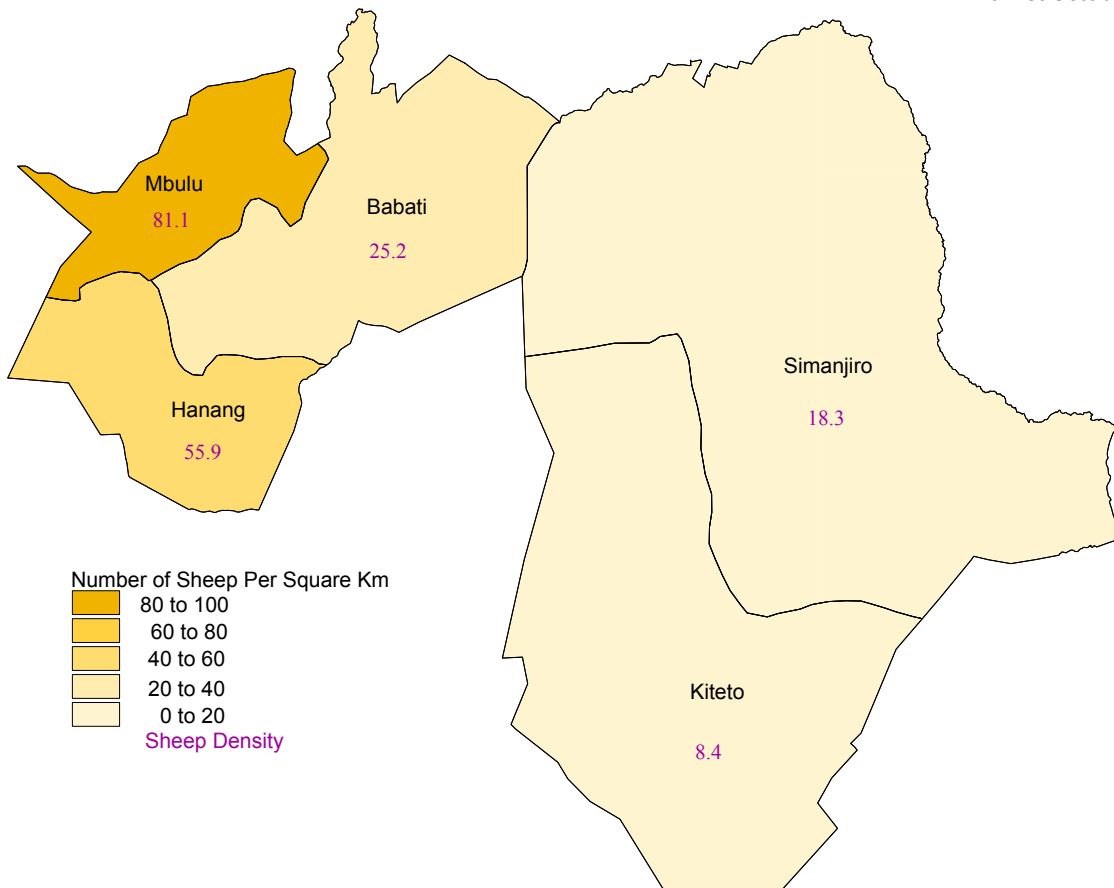
MAP 3.40 MANYARA
Goats Density by District as of 1st October 2003



MAP 3.41 MANYARA
Sheep population by District as
of 1st Octobers 2003



MAP 3.42 MANYARA
Sheep Density by District as
of 1st October 2003



3.12.5 Chicken Production

The poultry sector in Manyara region was dominated by chicken production. The region contributed 2.1 percent to the total chicken population on Tanzania Mainland.

3.12.5.1 Chicken Population

The number of households keeping chicken in Manyara region was 89,848 raising about 699,345 chickens. This gives an average of 8 chickens per chicken-rearing household. In terms of total number of chickens in the country, Manyara region was ranked twenty out of the 21 Mainland regions.

The District with largest number of chickens was Babati

(271,571 chickens, 39% of the total number of chickens in the region), followed by Mbulu (152,860, 22%), Hanang (149,058, 21%), Simanjiro (82,520, 12%) and Kiteto (43,336, 6%) (Chart 3.117 and Map 3.44). However Mbulu district had the highest chicken density (126 head per km² (Map 3.45).

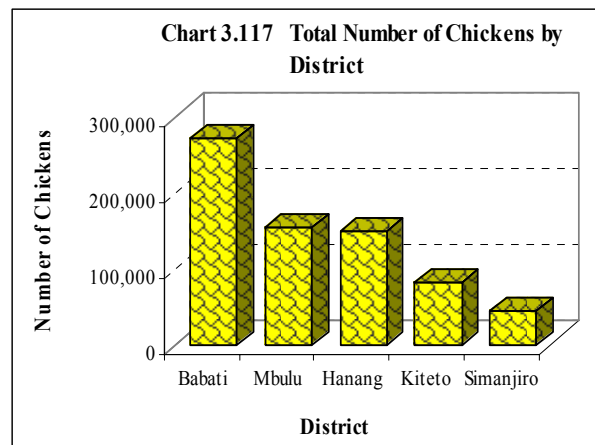


Table 3.14 Number of Households and Chickens Raised by Flock Size

Flock Size	Number of Households	%	Number of Chicken	Average Chicken by Households
1-4	33,949	37.8	98,124	3
5-9	28,933	32.2	185,796	6
10-19	21,120	23.5	259,732	12
20-29	4,460	5.0	95,842	21
30-39	726	0.8	23,494	32
40-49	306	0.3	12,239	40
50-99	336	0.4	22,258	66
100+	18	0.0	1,860	106
Total	89,848	100.0	699,345	8

3.12.5.3 Chicken Flock Size

The results indicate that about 93 percent of all chicken-rearing households were keeping 1-19 chickens with an average of 6 chickens per holder. About 6.5 percent of holders were reported to be keeping the flock size of 20 to 99 chickens (Table 3.14).

3.12.6. Other Livestock

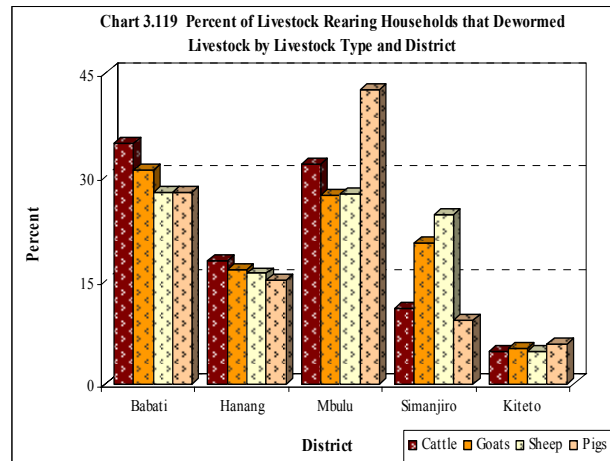
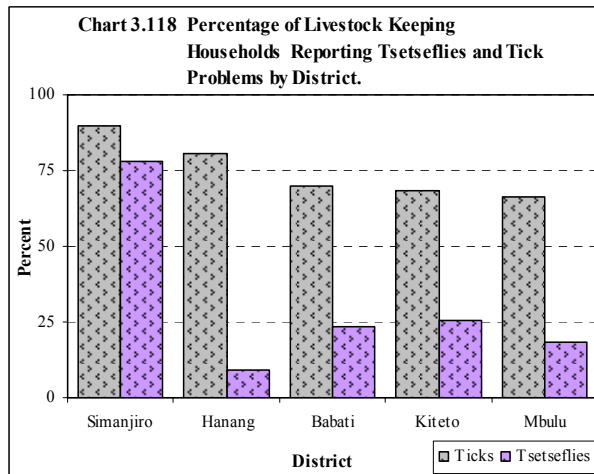
There were 18,942 ducks, 10,698 turkeys, 8,707 rabbits and 47,009 donkeys raised by rural agricultural households in Manyara region. Table 3-16 indicates the number of other livestock kept in each district. The biggest number of ducks in the region was found in Kiteto District (59% of all ducks in the region), followed by Babati (26%), Simanjiro (9%), Mbulu (3%) and Hanang (2%). Turkeys were reported in Mbulu, Kiteto and Simanjiro districts only, whilst rabbits were reported in Kiteto, Simanjiro and Babati. Most of the donkeys were found in Simanjiro, followed by Hanang, mbulu and Kiteto (Table 3.15).

Table 3.15 Number of Other Livestock by Type of Livestock and District

District	Type of Livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Babati	4,946	.	122	2,968	4,669
Hanang	458	.	.	9,735	.
Mbulu	599	5,131	.	8,268	.
Simanjiro	1,695	2,105	822	18,282	794
Kiteto	11,243	3,462	7,763	7756	.
Total	18,942	10,698	8,707	47,009	5,463

3.12.7 Pest and Parasite Incidence and Control

The results indicate that 74 percent and 26 percent of the total livestock-keeping households reported to have encountered ticks and tsetse fly problems respectively. Chart 3.118 shows that there was a predominance of tick related diseases over tsetse related diseases. Incidences of both problems were highest in Simanjiro district but lowest in Mbulu district (Map 3.46).



The most practiced method of tick controlling was spraying with 55 percent of livestock-rearing households that reported the problem using the method. Other methods used were smearing (19%), dipping (8%) and other traditional methods like hand picking (5%). However, 13 percent of livestock-keeping households did not use any method.

The most common method used to control tsetse flies was spraying which was practiced by 39.5 percent of livestock-rearing households reporting the problem, followed by dipping (16%) and other traditional methods (4%). However, 41 percent of the livestock rearing households did not use any of the three aforementioned methods.

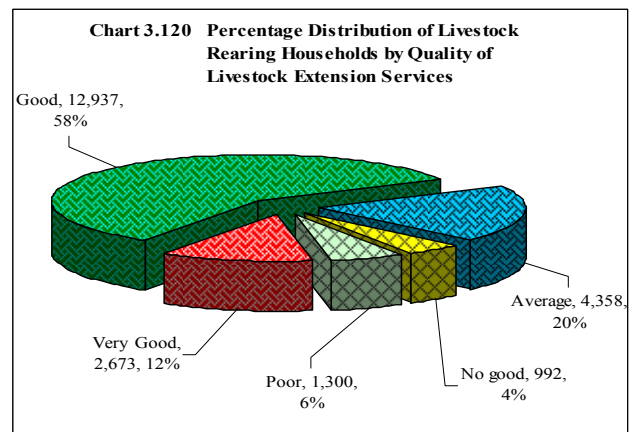
3.12.7.1 De-worming

Livestock rearing households that de-wormed their animals were 63,343 (63% of the total livestock rearing households in the region). The percentage of the households that de-wormed cattle was 55 percent, goats (51%), sheep (54%) and pigs (75%) (Chart 3.119).

3.12.8. Access to Livestock Services

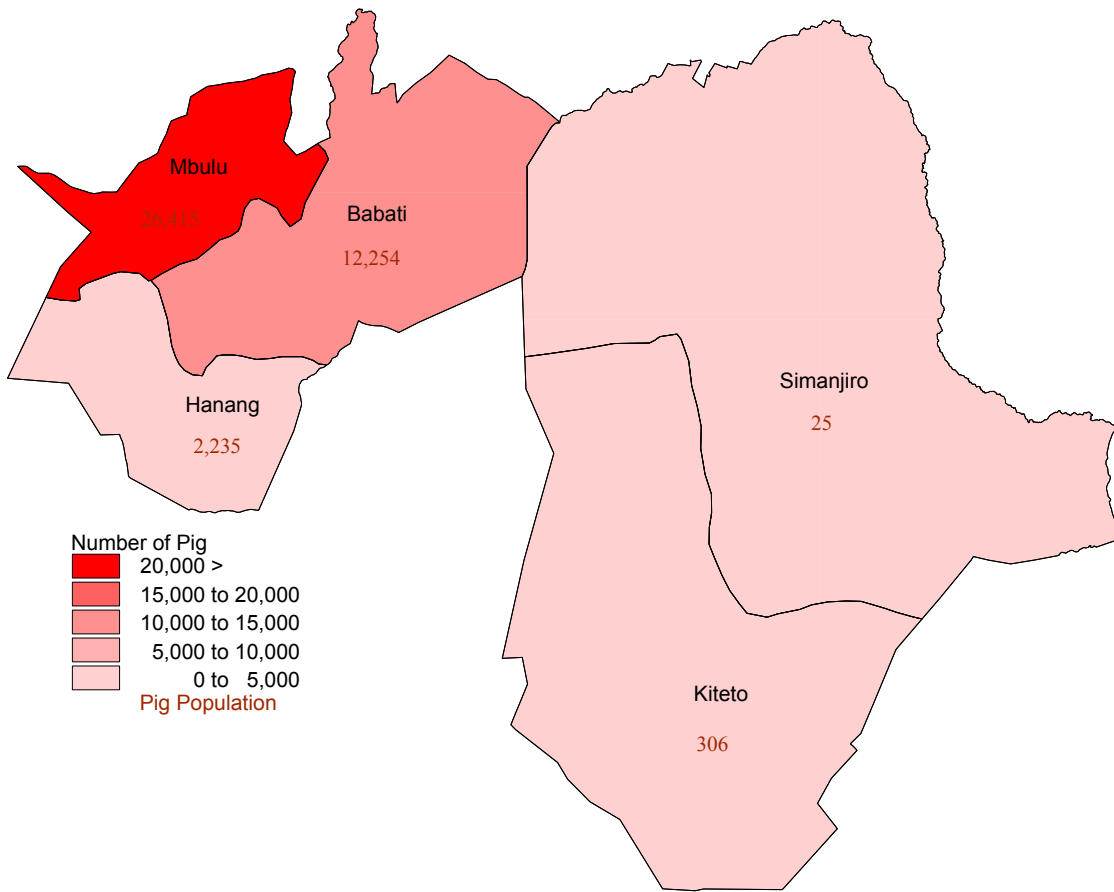
3.12.8.1 Access to Livestock Extension Services

The total number of households that received livestock advice was 22,043, representing 22.6 percent of the total livestock-rearing households and 14 percent of the agricultural households in Manyara region. The main livestock extension agent was the government which provided service to about 53 percent of all households receiving livestock extension services. The rest of the households got services from NGOs/development projects (17%), Cooperatives (12%), large scale farms (12%) and other sources provided (6%).

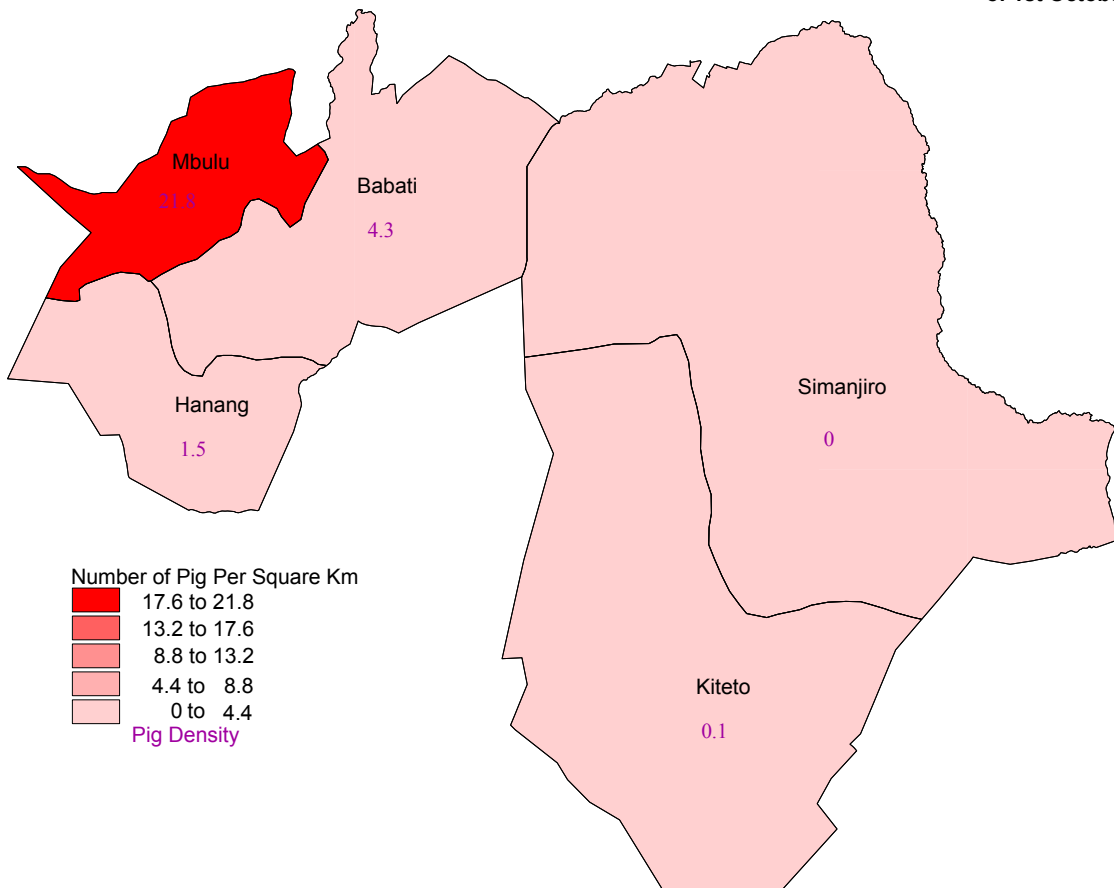


About 58 percent of livestock rearing households described the general quality of livestock extension services as being good, 20 percent said they were average and 12 percent said they were very good. However, 6 percent of the livestock rearing households said the quality was not good whilst 4 percent described them as poor (Chart 3.120).

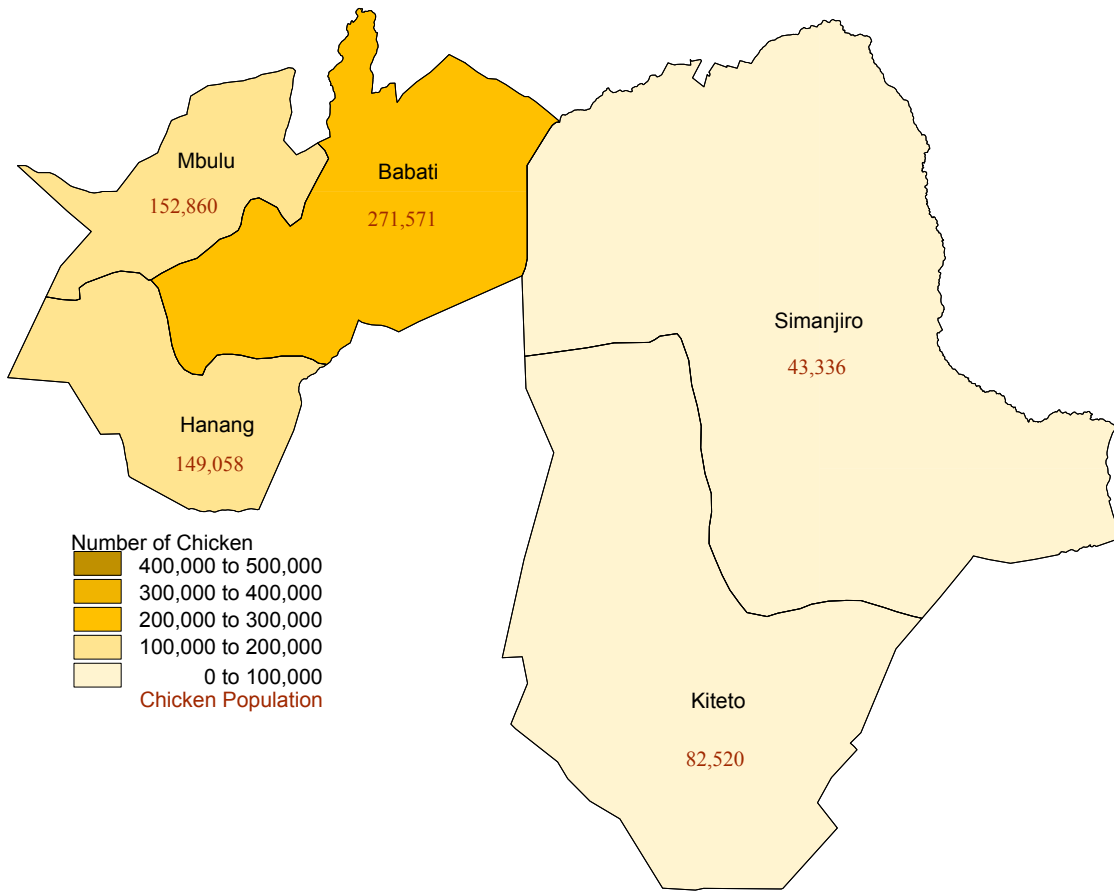
MAP 3.43 MANYARA
Pig population by District as
of 1st Octobers 2003



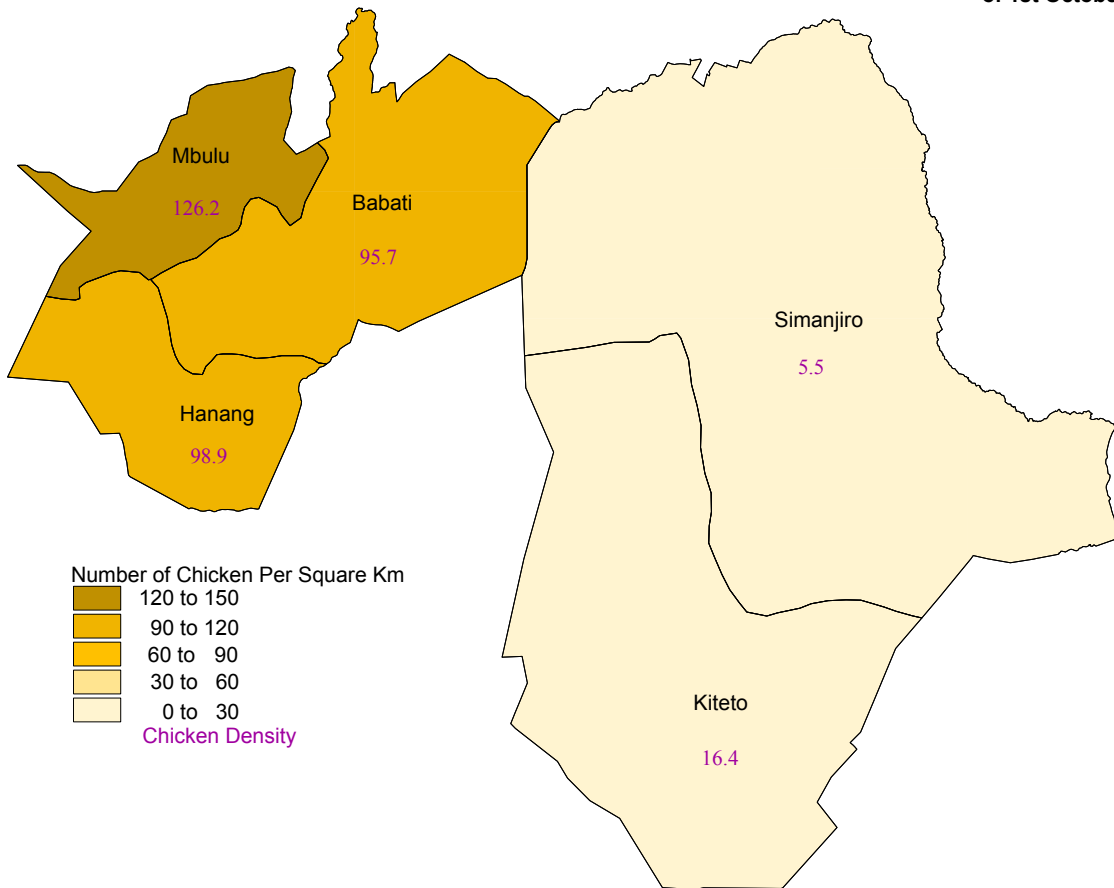
MAP 3.44 MANYARA
Pig Density by District as
of 1st October 2003



MAP 3.45 MANYARA
Number of Chicken by District as
of 1st October 2003

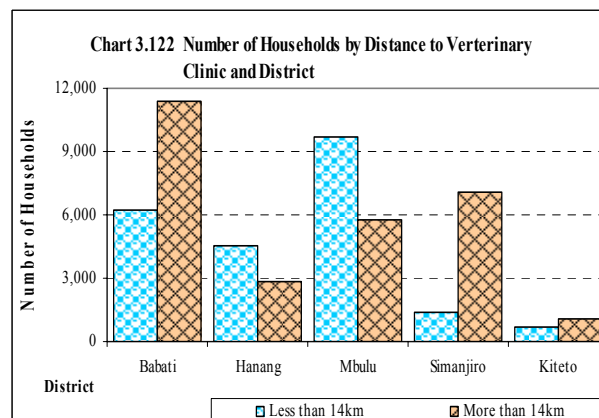
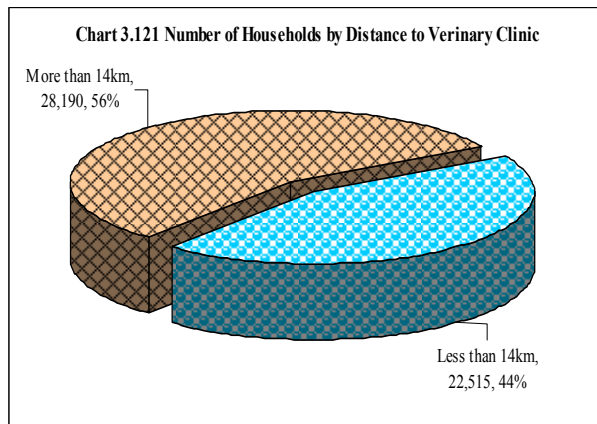


MAP 3.46 MANYARA
Chicken Density by District as
of 1st October 2003



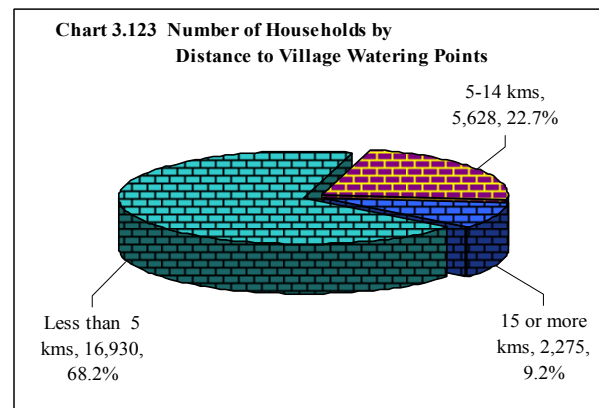
3.12.8.2 Access to Veterinary Clinic

Many veterinary clinics were located very far from livestock rearing households. About 56 percent of the livestock rearing households that accessed the service accessed it, at a distance of more than 14 kms. Only 44 percent of them accessed the services within 14 kms from their dwellings (Chart 3.121). The most affected district was Simanjiro district with over 50 percent of livestock rearing households accessing the services at a distance of more than 50 kms. Hanang and Mbulu districts were the least affected because about 61 and 62 percent of the households could access the service within a distance of 14 kilometres respectively (Chart 3.122).

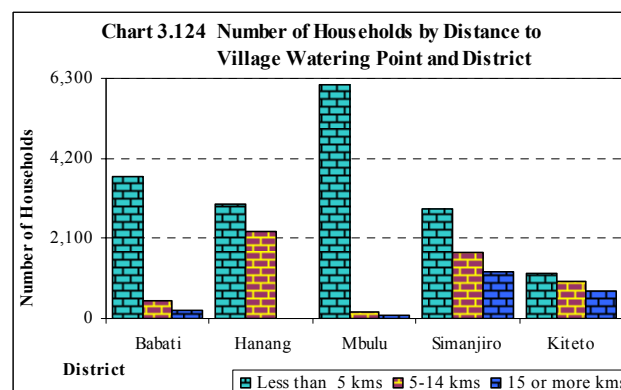


3.12.8.3 Access to Village Watering Points/dam

The number of livestock rearing households residing less than 5 kms from the nearest village watering point was 16,930 (68% of livestock rearing households accessing the watering point in Manyara region), whilst 5,628 households (23%) resided between 5 and 14 kms. However, 2,275 households (9%) had to travel a distance of 15 or more kms to the nearest watering point (Chart 3.123).



Mbulu district had the best livestock water supply with the majority of livestock rearing households residing within 5 kms from the nearest watering point. This was followed by Babati, Hanang, Simanjiro and Kiteto districts. In Kiteto district about 59 percent of the livestock rearing households had to travel a distance of more than five kilometers to the nearest watering point (Chart 3.124).

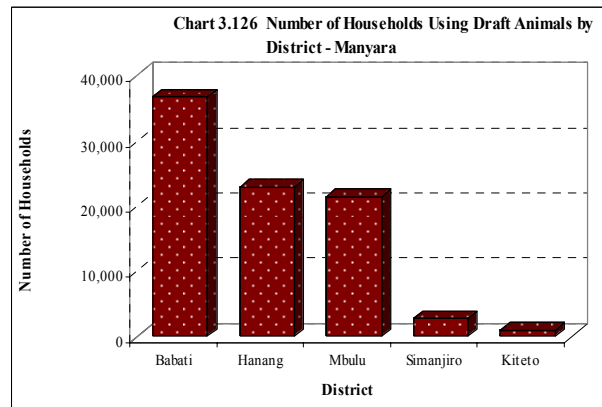
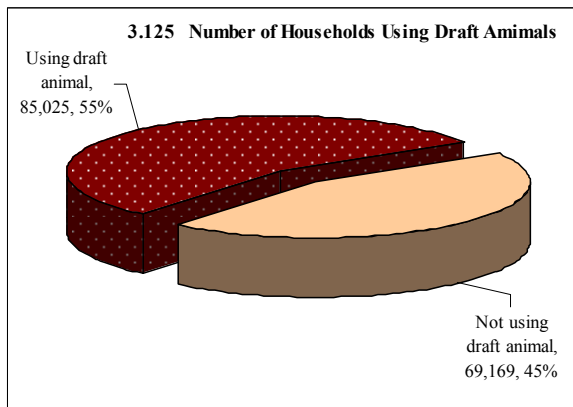


3.12.9 Animal Contribution to Crop Production

3.12.9.1 Use of Draft Power

Use of draft animals to cultivate land in Manyara region was by 85,025 households (55% of the total households in the region) using them (Chart 3.125).

The number of households that used draft animals in Babati was 36,800 representing 43 percent of the households using draft animals in the region, followed by Hanang 22,952 households, 27%), Mbulu 21,505 households, 25%), Simanjiro (2,743 household, 3%) and Kiteto (1,024 households, 1%) (Chart 3.126 and Map 3.47) .



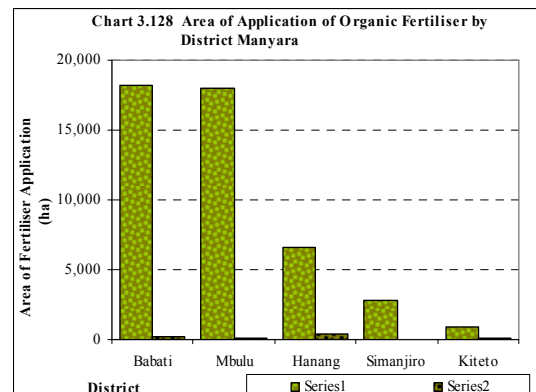
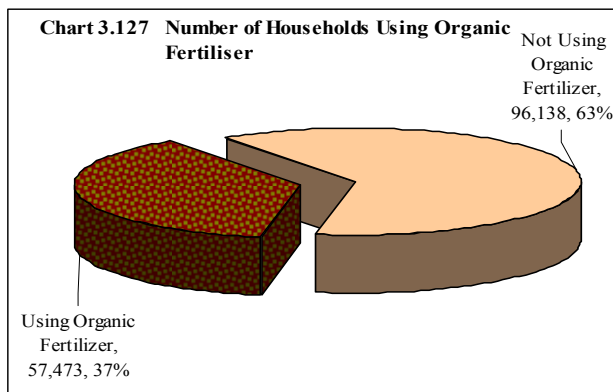
The region had 147,712 oxen that were used to cultivate 110,979 hectares of land. This represents only 6.6 percent of the total oxen found on the Mainland. The largest area cultivated using oxen was found in Babati district (39,985 ha, 36% of the total area cultivated using oxen).

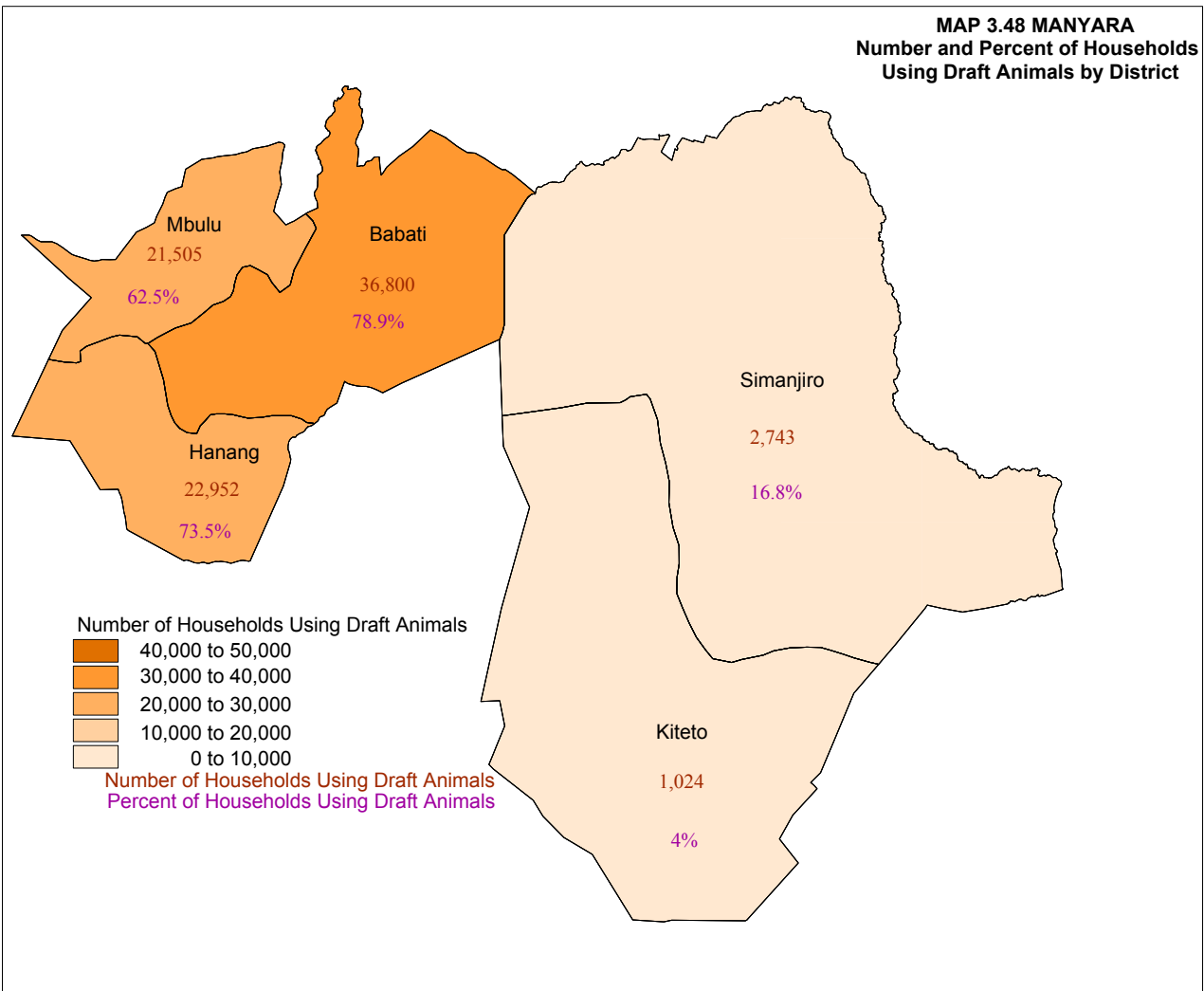
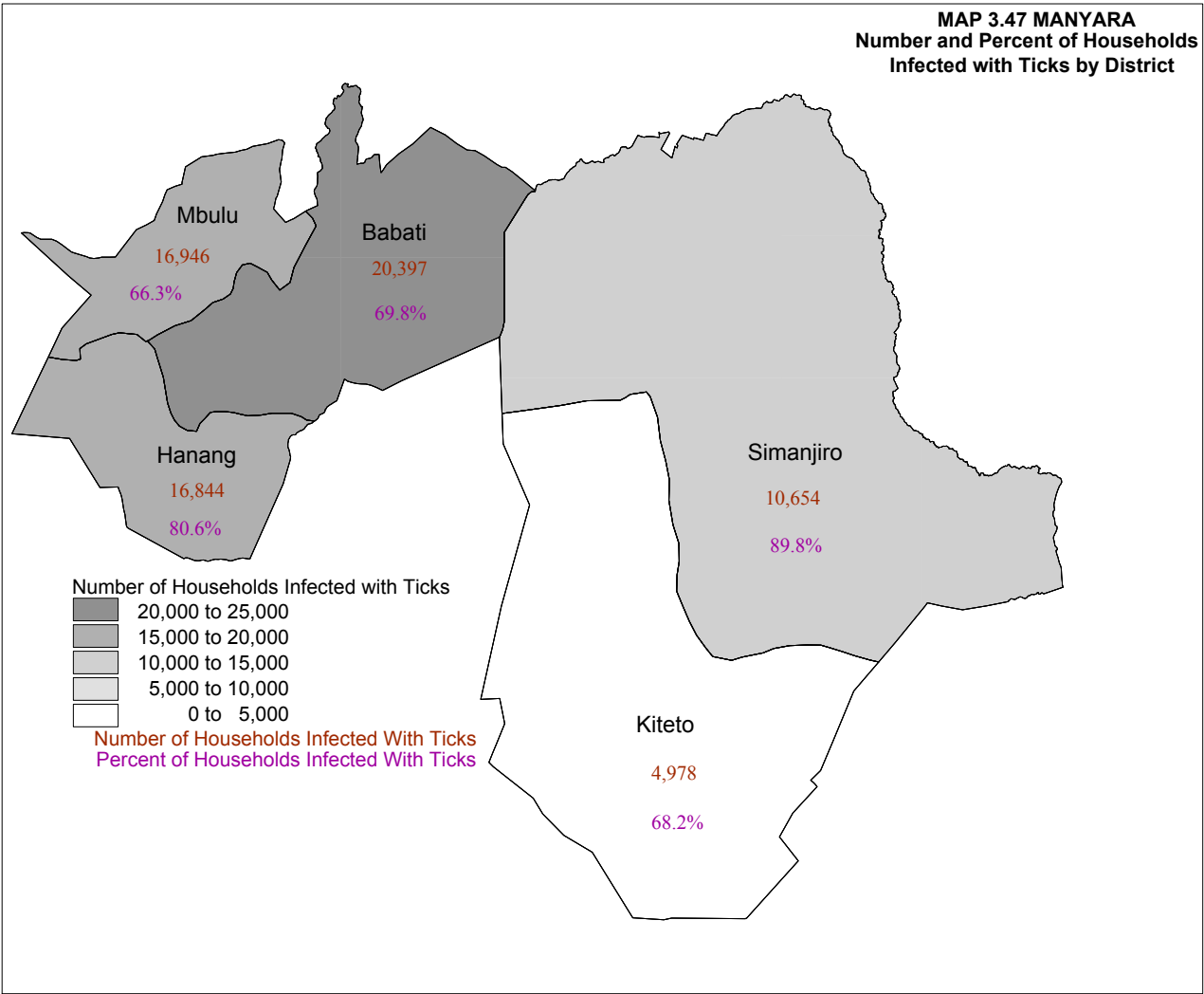
3.12.9.2 Use of Farm Yard Manure

The number of Households using organic fertilizer in Manyara region was 57,473 (38% of total crop growing households in the region) (Chart 3.127). The total area applied with organic fertilisers was 47,334 ha of which 999 hectares (2.1% of the total area applied with organic fertiliser or 0.37% of the area planted with annual crops and vegetables in Manyara region during the long rainy season) was applied with farm yard manure (Map 3.48).

3.12.9.4 Use of Compost

Only 800 ha (2% of the area of organic fertilizer application) was applied with compost. The largest area applied with compost was found in Hanang district with 387 hectares (48% of the total area applied with compost) followed by Babati (202 ha, 25%), Kiteto (120 ha, 15%), Mbulu (77 ha, 10%) and Simanjiro (14 ha, 2%) (Chart 3.128 and Map 3.49).



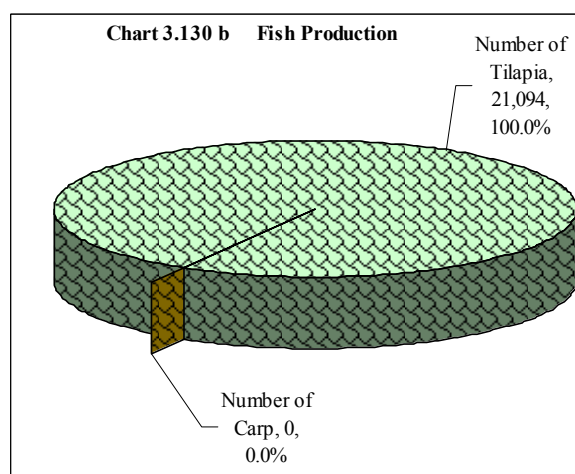
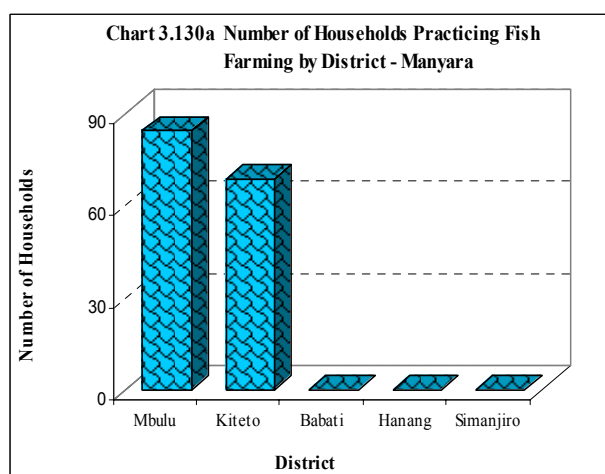
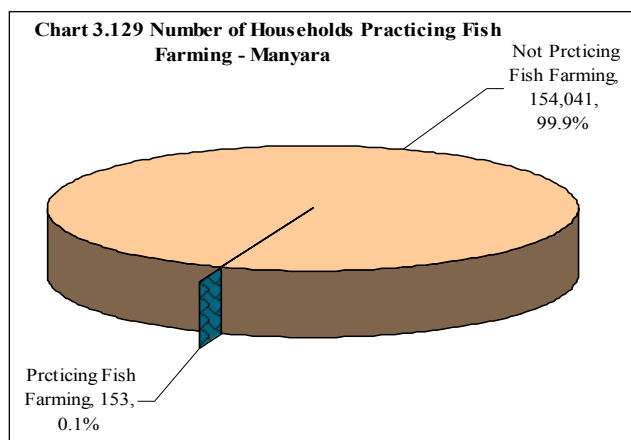


3.12.10 Fish Farming

The number of households involved in fish farming in Manyara region was 153 representing 0.1 percent of the total agricultural households in the region (Chart 3.129 and Map 3.50).

The only districts involved in fish farming were Mbulu and Kiteto with Mbulu having 84 households involved in fish farming and Kiteto 69 households (Chart 3.130a).

The main source of fingerings was the non governmental organizations and/or projects which provided fingerings to 100 percent of the fish farming households.



All fish farming households in the region used the dug-out-pond system and the only fish specie planted was Tilapia. The number of fish harvested in Manyara region was 21,094. (Chart 3.130b) and all fish were sold to their neighbours.

3.13. POVERTY INDICATORS

The agricultural census collected data on poverty for the purpose of providing a base for tracking progress in poverty reduction strategies undertaken by the government.

3.13.1 Access to Infrastructure and Other Services

The results indicate that among the evaluated services, tarmac roads were the services located very far from most of the household's dwellings than any other service. It was located at an average distance of 101.7 kilometers from the agricultural household's dwellings. Other services and their respective average distances in kilometers from the dwellings were district capital (47.4km) tertiary market (36.9km), hospitals (36.1km), secondary schools (21.7km), secondary markets (12.1km) primary market (10.5km), health clinics (8.4km), all weather roads (5.5km) , primary schools (3.1km) and feeder roads (1.5km) (Table 3.16).

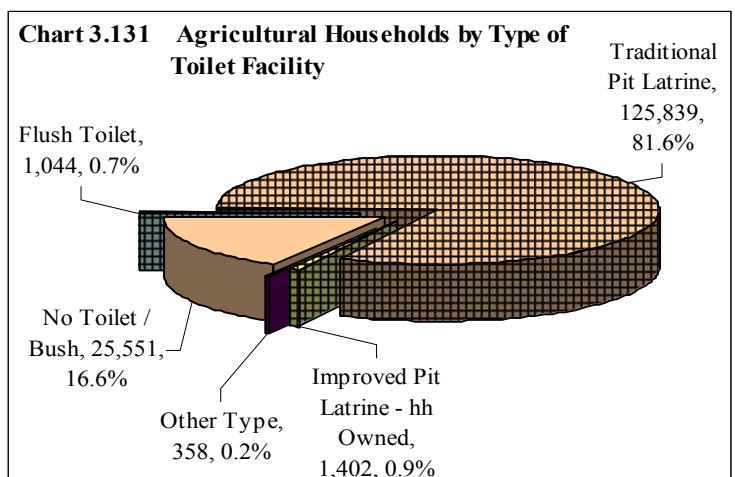
Table 3.16: Mean Distances from Household Dwellings to Infrastructures and Services by District

District	Mean Distance to										
	Secondary Schools	Primary Schools	All weather roads	Feeder Roads	Hospitals	Health Clinics	District Capital	Primary Markets	Secondary Market	Tertiary Market	Tarmac Roads
Babati	8.2	2.0	5.0	1.2	21.6	6.0	30.9	10.5	7.6	30.7	100.2
Hanang	17.0	2.8	7.2	1.3	25.8	12.5	35.6	9.2	9.9	31.1	112.5
Mbulu	10.2	4.3	5.0	1.1	28.0	6.7	44.9	5.8	12.9	17.3	92.4
Simanjiro	65.2	5.2	5.8	1.7	81.9	10.6	108.9	23.7	26.2	93.0	84.5
Kiteto	39.8	2.5	4.6	2.6	56.3	8.9	55.7	10.1	12.9	45.7	114.9
Total	21.7	3.1	5.5	1.5	36.1	8.4	47.4	10.5	12.1	36.9	101.7

Only 6 percent of the agricultural households reported the available infrastructures and services as ‘very good’ whereas 30 percent reported them to be average. Fifteen percent of the agricultural households said the infrastructures and services were poor were, 25 percent said they were ‘no good’ and 24 percent said they were ‘good’.

3.13.2 Type of Toilets

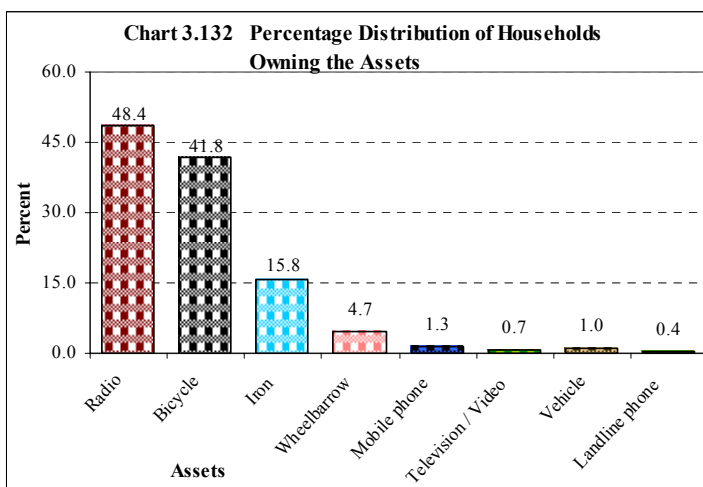
A large number of rural agricultural households used traditional pit latrines (125,839 households, 81.6% of all rural agricultural households), 1,402 households (0.9%) used improved pit latrine and 1,044 households (0.7%) used flush toilets. The remaining 358 household (0.2%) used other toilets facilities. However, 25,551 households (16.6%) in the region had no toilet facilities. (Chart 3.131).

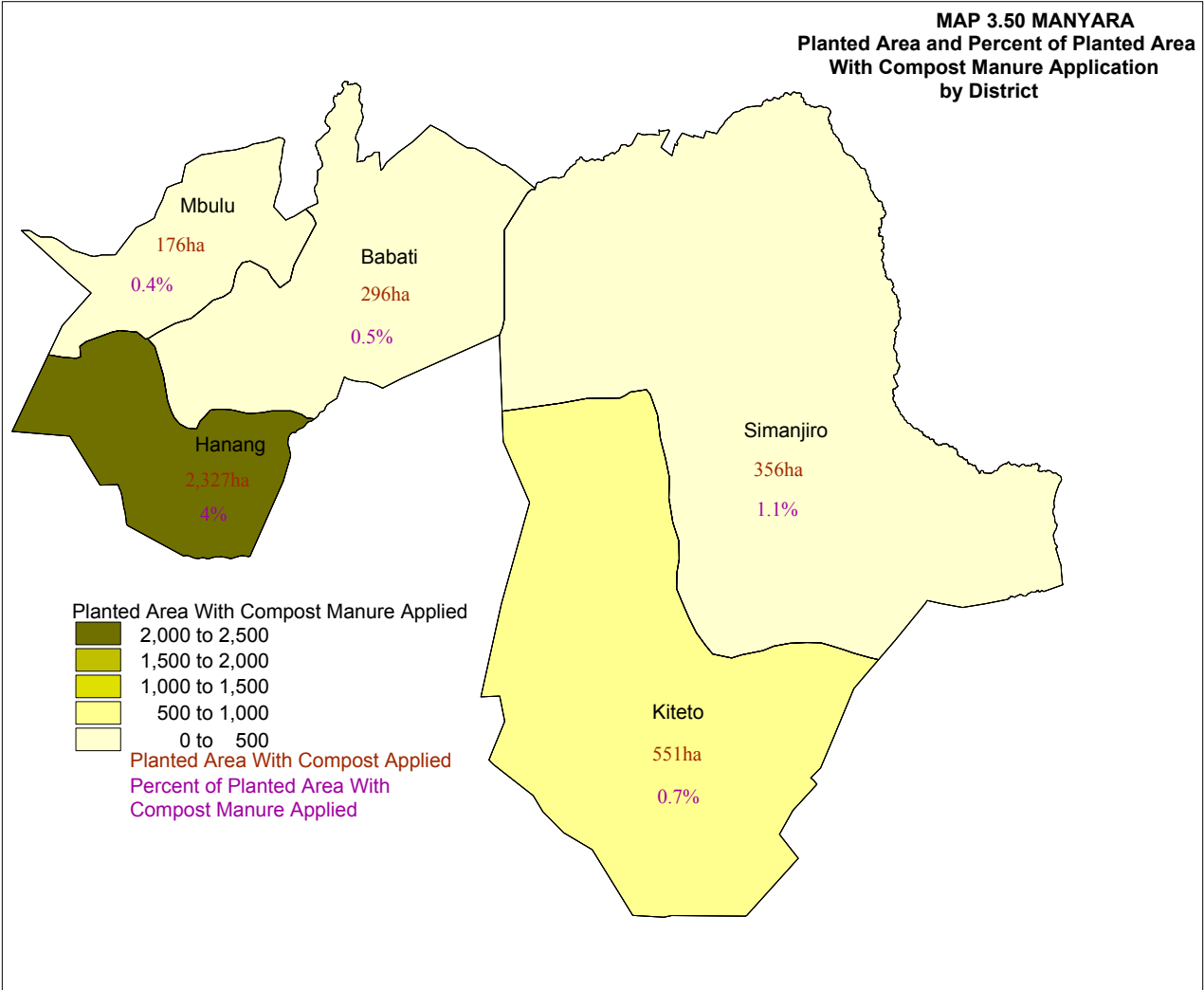
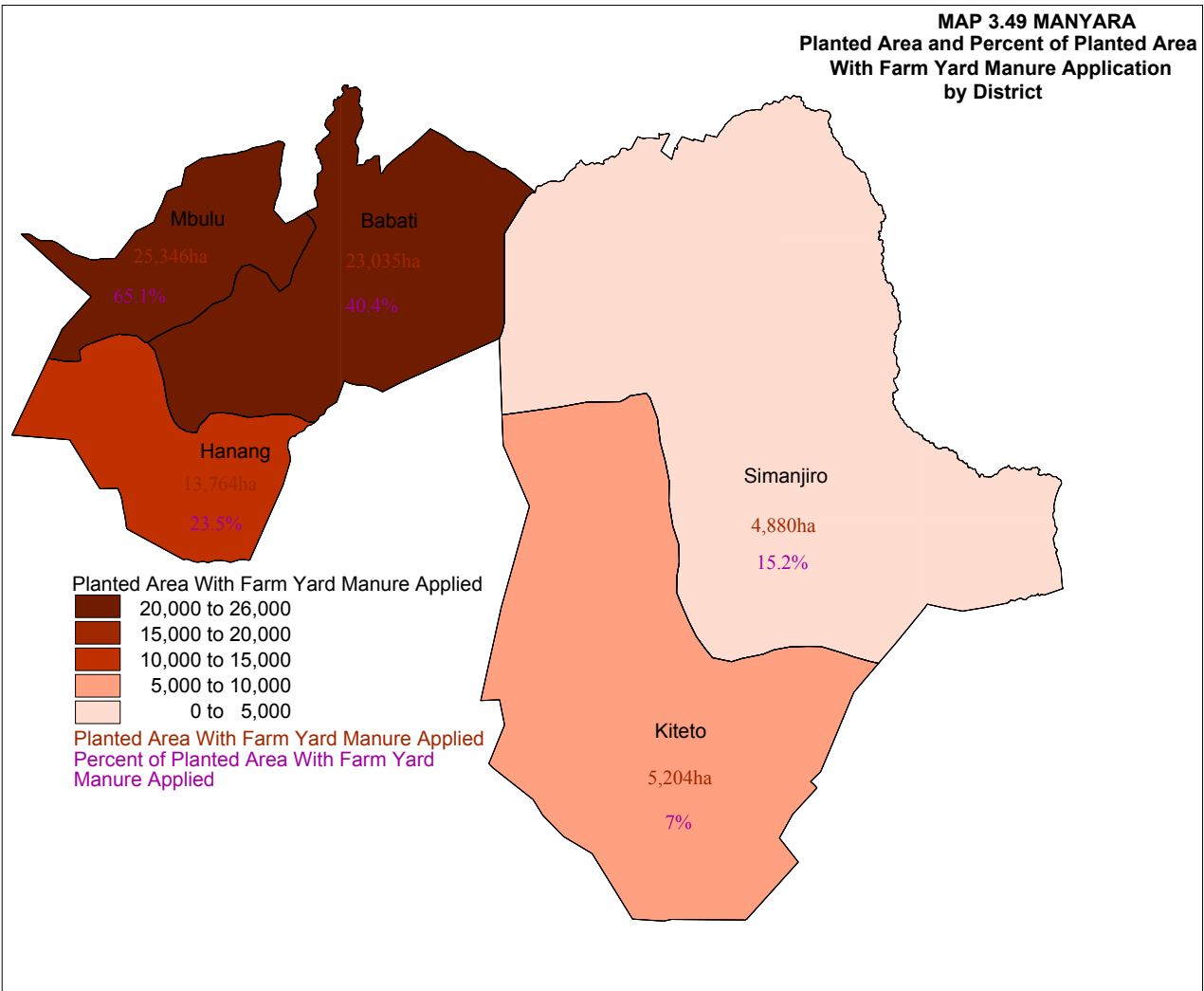


The distribution of the households without toilets within the region indicates that 43.7 percent of them were found in Simanjiro district and 23.2 percent were from Kiteto. The percentages of households without toilets in other districts were as follows; Babati (18.0%), Hanang (14.5%) and Mbulu (0.6%) Map 3.51).

3.13.3 Household's Assets

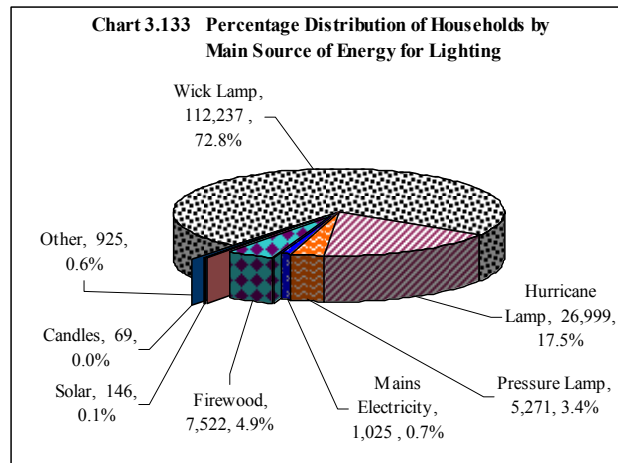
The radios was an asset owned by most rural agricultural households in Manyara region with 74,560 households (48.4% of the agriculture households in the region) owning the asset, followed by bicycle (64,464 households, 41.8%), iron (24,366 households, 15.8%), wheelbarrow (7,312 households, 4.7%), mobile phone (1,930 households, 1.3%), vehicle (1,483 households, 1.0%), television/video (1,028 households, 0.7%) and landline phone (662 households, 0.4%) (Chart 3.132).





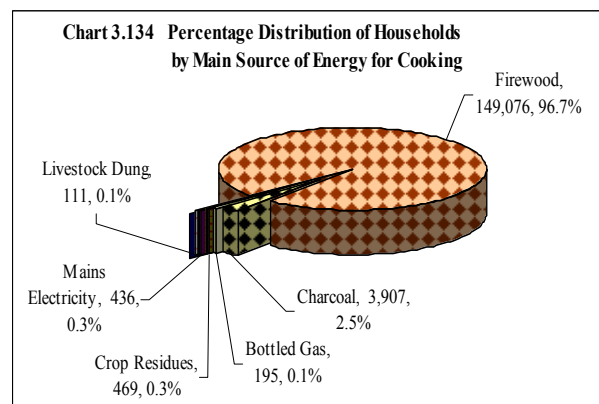
3.13.4 Sources of Lighting Energy

Wick lamp was the most common source of lighting energy in the region with 72.8 percent of the total rural households using this source of energy, followed by hurricane lamp (17.5%), firewood (4.9%), pressure lamp (3.4%), mains electricity (0.7%), solar (0.1%), candle (0.0%) and other (0.6%) (Chart 3.133).



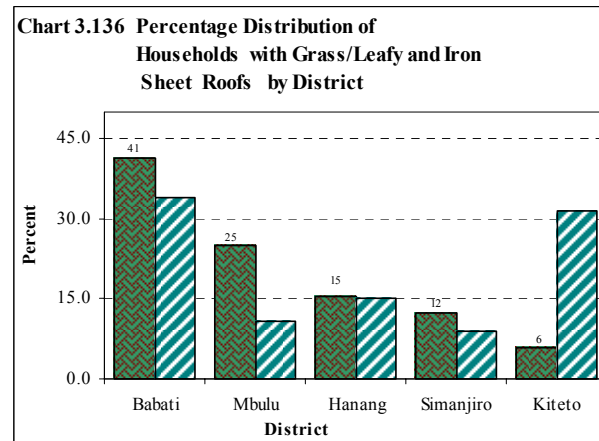
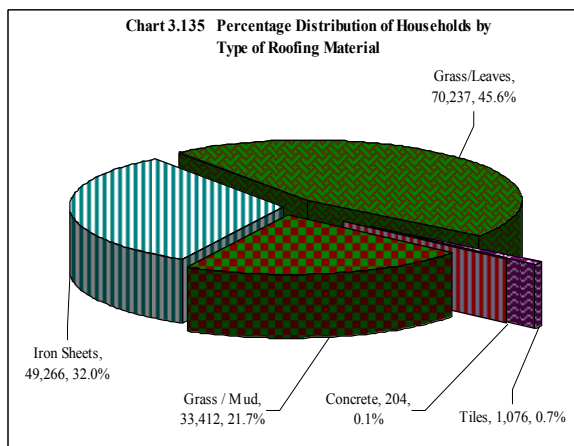
3.13.5 Sources of Energy for Cooking

The most prevalent source of energy for cooking was firewood, which was used by 96.7 percent of all rural agricultural households in Manyara region. This was followed by charcoal (2.5%). The rest of energy sources accounted for 0.79 percent. These were bottled gas (0.13%), crop residues (0.30%), mains electricity (0.28%), livestock dung (0.07%), (Chart 3.134).



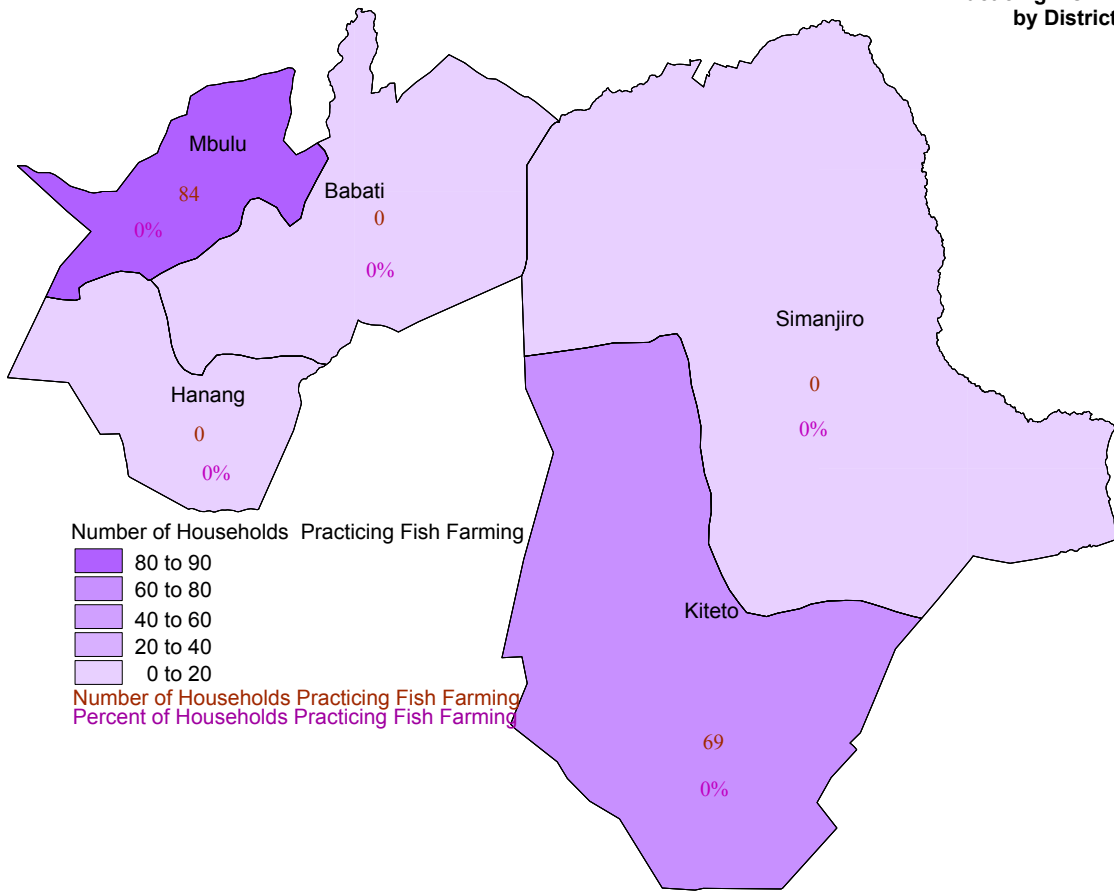
3.13.6 Roofing Materials

The most common material used for roofing of the main dwelling in Manyara region was grass/leaves which was used by 45.6 percent of the rural agricultural households in the region. This was followed by iron sheets (32.0%), grass/mud (21.7%), tiles (0.7%) and concrete (0.1%) (Chart 3.135).

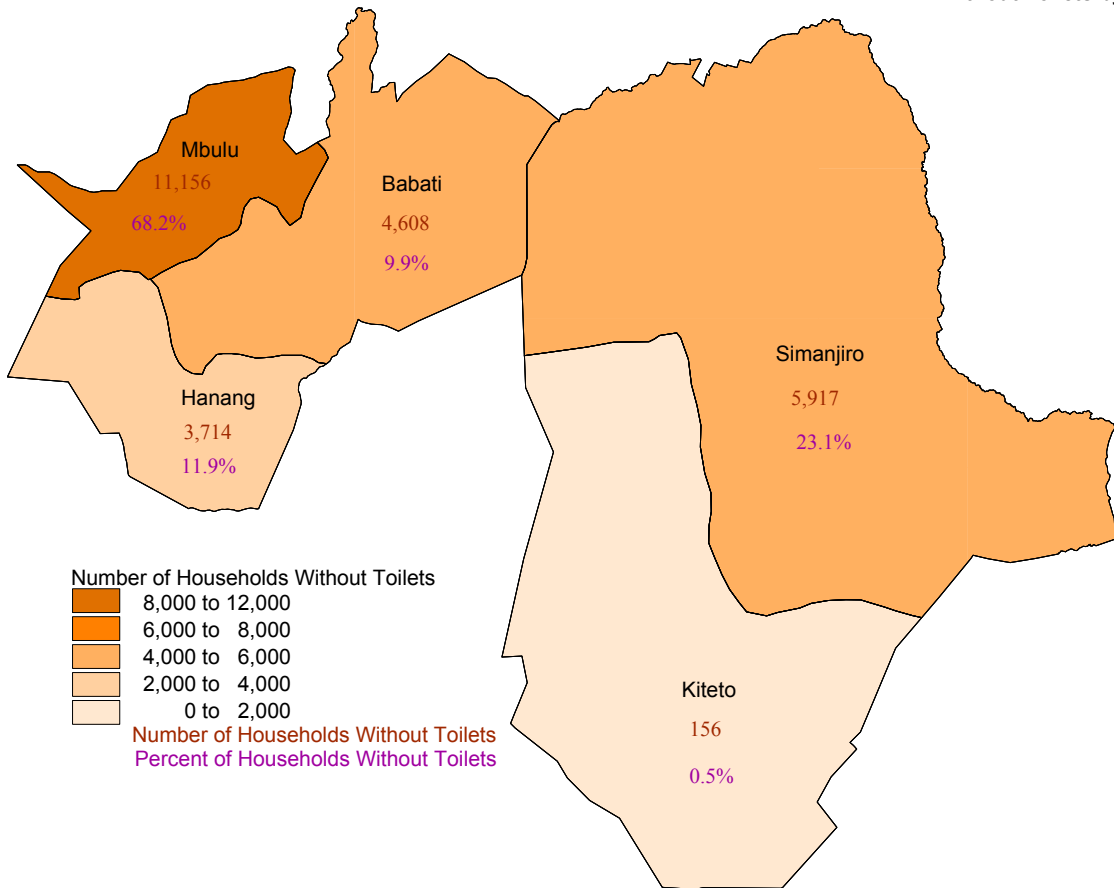


Babati district had the highest percentage of households with grass/leaves roofing (41%), followed by Mbulu district (25%), Hanang (15%), Simanjiro (12%) and Kiteto (1%). Babati also had the highest percentage of households with iron sheet roofing (34%), followed by Kiteto district (31%), Hanang (15%), Mbulu (10%) and Simanjiro (9%) (Chart 3.136 and Map 3.52).

MAP 3.51 MANYARA
Number and Percent of Households Practicing Fish Farming by District

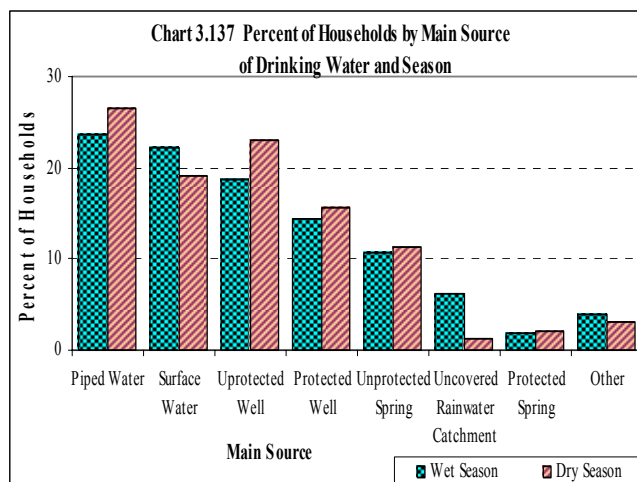


MAP 3.52 MANYARA
Number and Percent of Households Without Toilets by District

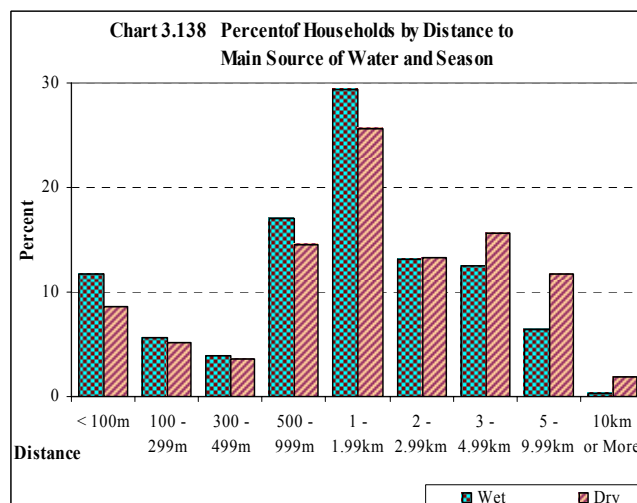


3.13.7 Access to Drinking Water

The main source of drinking water for rural agricultural households in Manyara region was piped water (24 percent of households use piped water during the wet season and 26 percent of the households during the dry seasons). This was followed by unprotected wells (19% of households during wet season and 23% during the dry season), surface water (22% of households during the wet season and 19% in the dry season), protected wells (15% of households in the wet season and 16% during dry season) and unprotected spring with 11 percent of households using the source for each seasons. Uncovered rain water was used as a main source by 6 percent of the agricultural households in the wet season and by 1 percent in the dry season and protected springs were used by 2 percent of the agricultural households during each season. Chart 3.137).



About 38 percent of the rural agricultural households in Manyara region obtained drinking water within a distance of less than one kilometer during wet season compared to 32 percent of the households during the dry season. However, 62 percent of the agricultural households obtained drinking water from a distance of one or more kilometers during wet compared to 68 percent of households in the dry season. The most common distance from the source of drinking water was between 1 and 2 km (Chart 3.138).



3.13.8 Food Consumption Pattern

3.13.8.1 Number of Meals per Day

The majority of households in Manyara region normally had 3 meals per day (59.7 percent of the households in the region). This was followed by 2 meals per day (38.7 percent) and 1 meal per day (1.1 percent). Only 0.5 percent of the households have 4 meals per day (Chart 3.139).

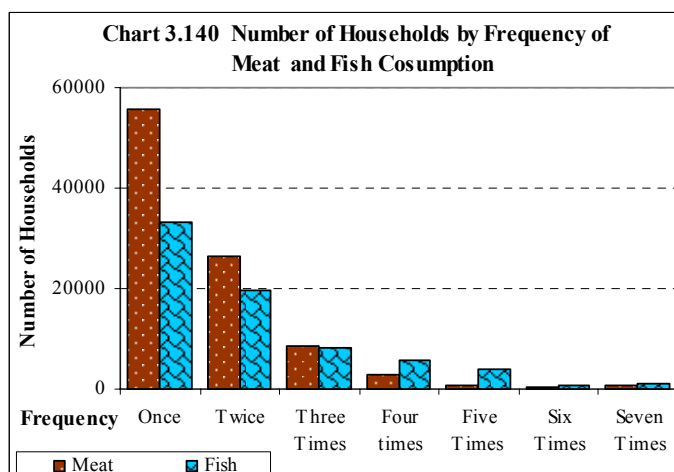
Simanjiro district had the largest percent of households eating one meal per day whilst Mbulu had the highest percent of households eating 3 meals per day (Table 3.17 and Map 3.53).

Chart 3.17: Number of Households by Number of Meals the Household Normally Takes per Day and District

District	Number of meals per day								
	One	%	Two	%	Three	%	Four	%	Total
Babati	604	1.3	15,580	33.4	30,356	65.1	94	0.2	46,635
Hanang	523	1.7	13,345	42.7	17,377	55.6	0	0.0	31,245
Mbulu	160	0.5	7826	22.8	26,395	76.8	0	0.0	34,381
Simanjiro	309	1.9	10,240	62.6	5,128	31.3	688	4.2	16,364
Kiteto	66	0.3	12,727	49.8	12,776	50.0	0	0.0	25,569
Total	1,662	1.1	59,718	38.7	92,032	59.7	782	0.5	154,194

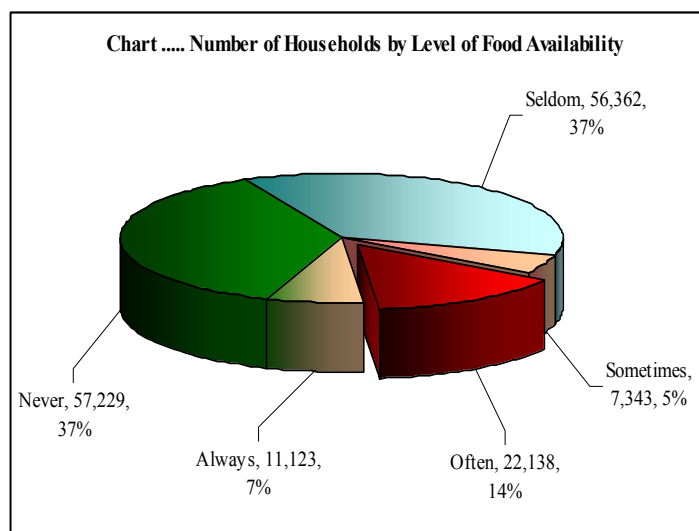
3.13.8.2 Meat Consumption Frequency

The number of agricultural households that consumed meat during the week preceding the census was 95,752 (62.1% of the agricultural households in Manyara region) with 55,685 households (58.2 % of those who consumed meat) consuming meat only once during the respective week. This was followed by those who had meat twice during the week (27.6%). Very few households had meat three or more times during the respective week. About 37.9 percent of the agricultural households in Manyara region did not eat meat during the week preceding the census (Chart 3.140 and Map 3.54).



3.13.8.3 Fish Consumption Frequencies

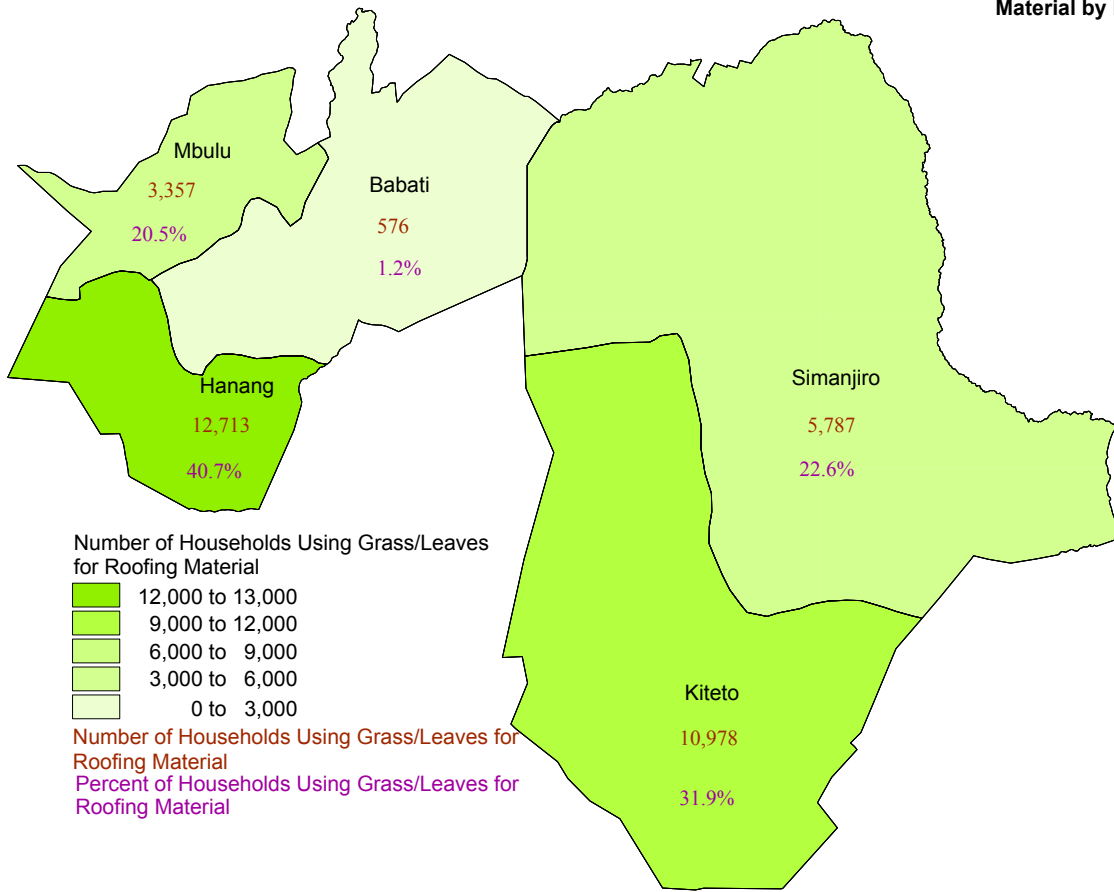
The number of agricultural households that consumed fish during the week preceding the census was 72,509 (47% of the total agricultural households in Manyara region) with 33,246 households (45.9 % of those who consumed fish) consuming fish once during the respective week. This was followed by those who had fish twice (26.9%). In general, the percentage of households that consumed fish three times or more during the week in Manyara region was 19,734 (27.2%) of the agricultural households that ate fish in the region during the respective period). About 53 percent of the agricultural households in Manyara region did not eat fish during the week preceding the census (Chart 3.140 and Map 3.55).



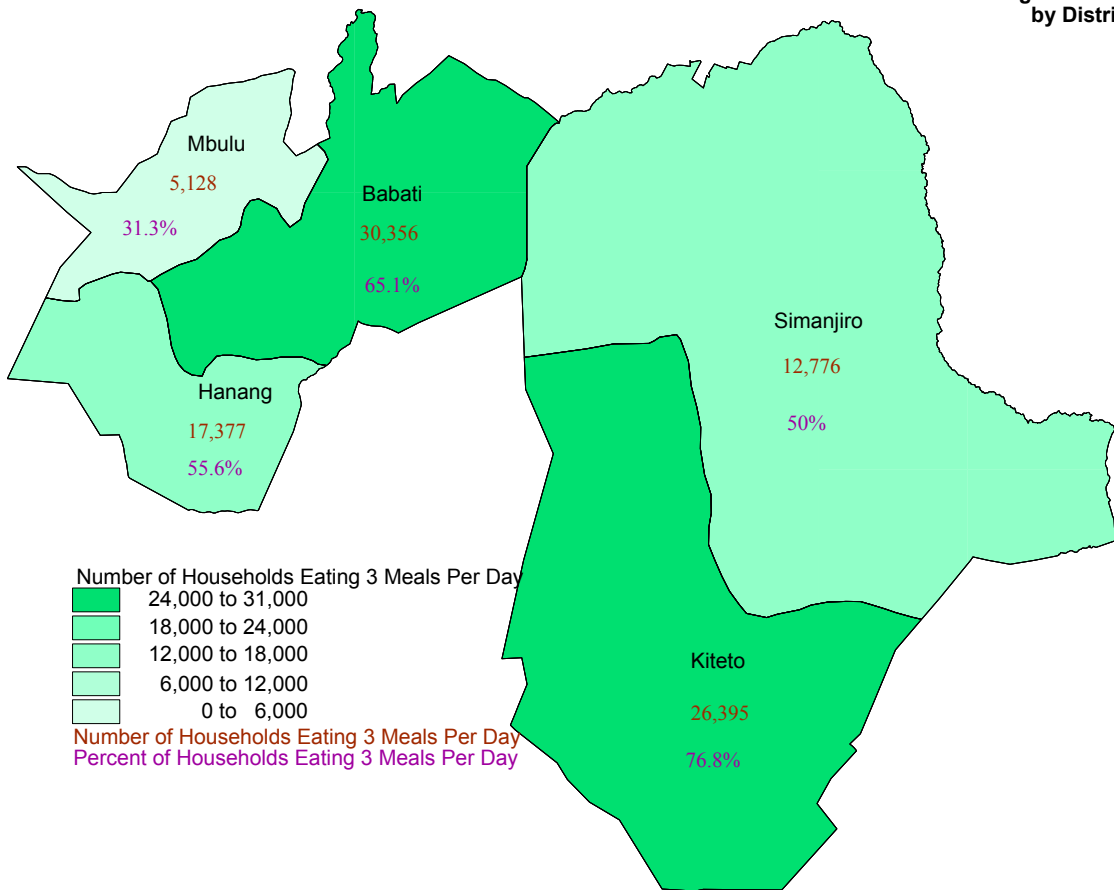
3.13.9 Food Security

In Manyara region, about 37 percent of the agricultural households (57,229 households) said they did not experience any food sufficiency problems, 56,362 households (36.6% of the total agricultural households in the region) said they rarely experienced problems in satisfying the household food requirement, whilst 7,343 households (4.8%) said they sometimes experience problems. However, 14.4 percent of the agricultural households in the region (22,138 households) often experienced problems in satisfying the household food requirement and 7.2 percent (11,123 households) said they always had problems (Chart 3.140a).

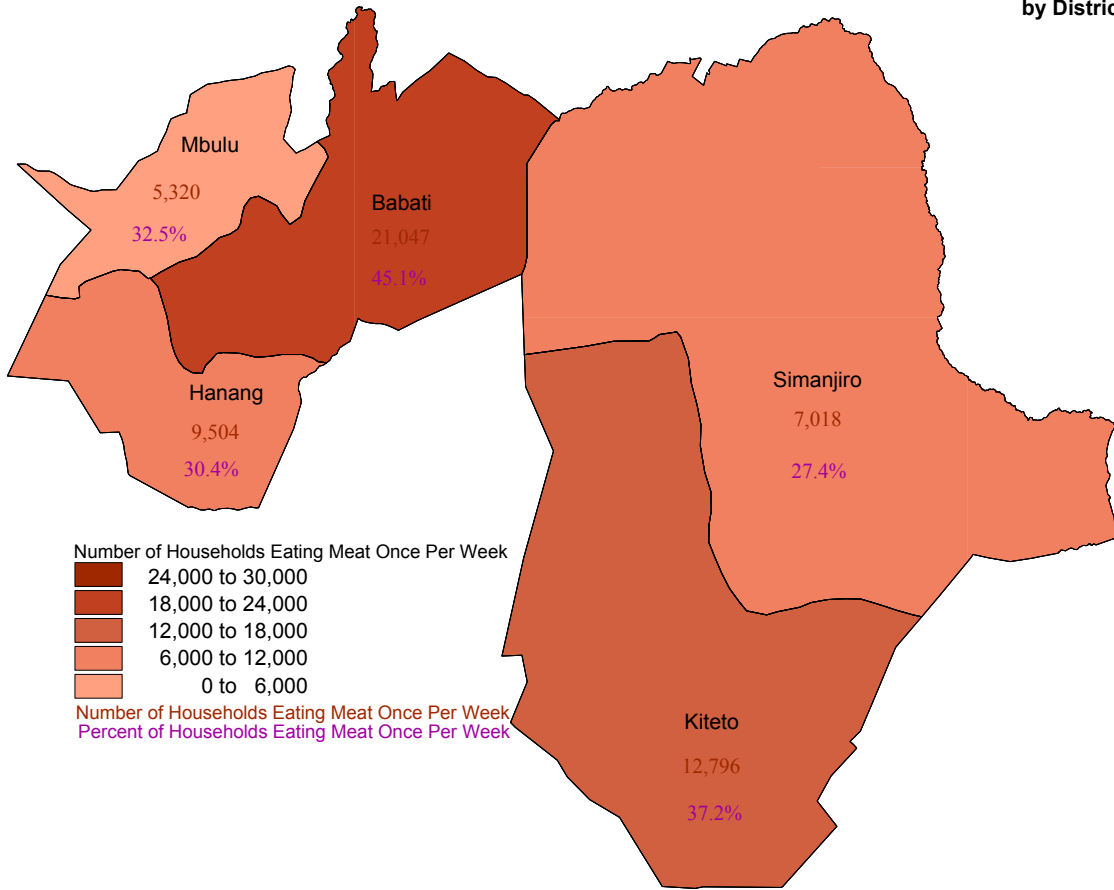
MAP 3.53 MANYARA
Number and Percent of Households
Using Grass/Leaves for Roofing
Material by District



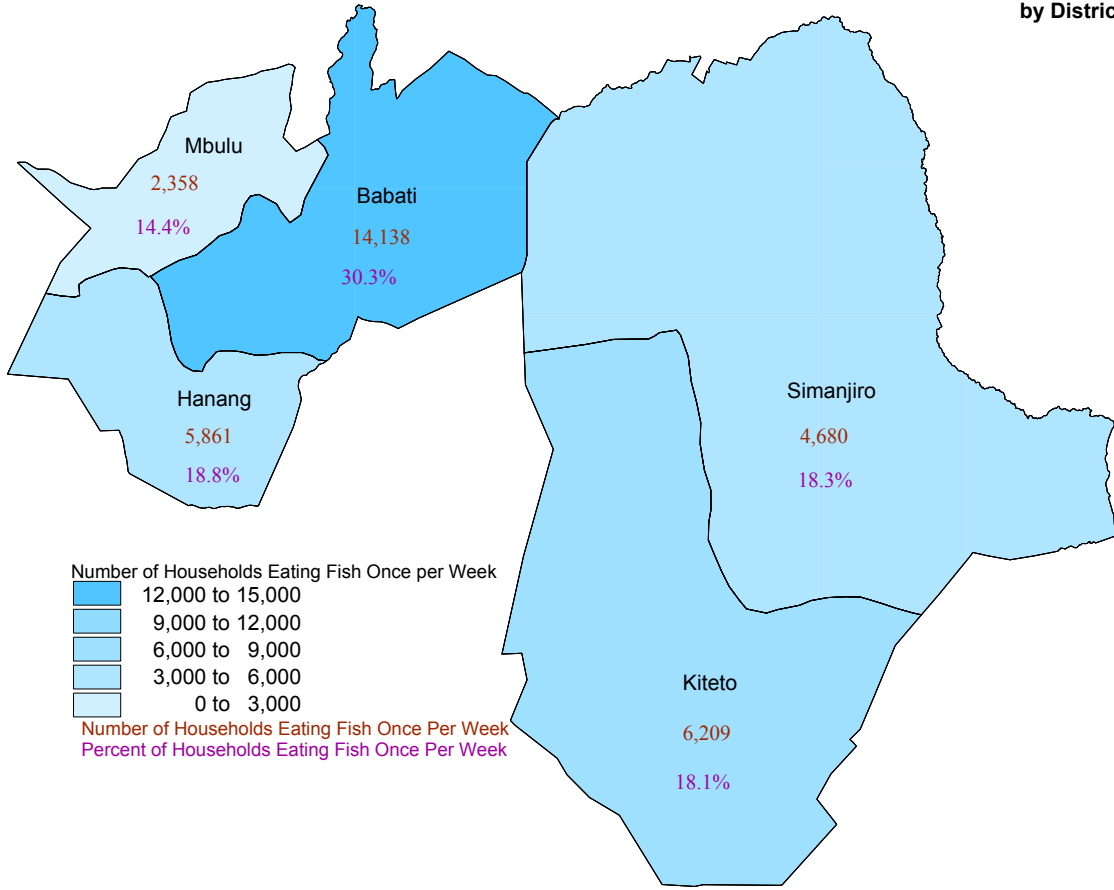
MAP 3.54 MANYARA
Number and Percent of Households
Eating 3 Meals Per Day
by District



MAP 3.55 MANYARA
Number and Percent of Households
Eating Meat Once Per Week
by District



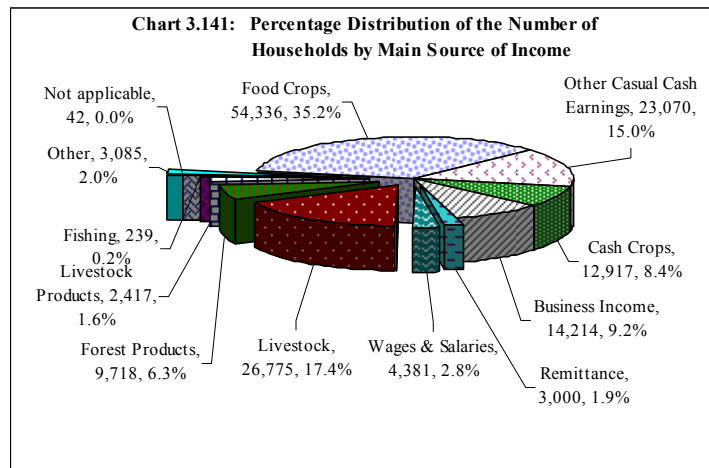
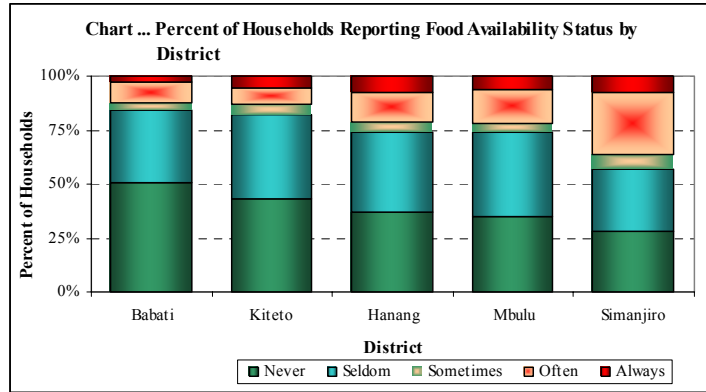
MAP 3.56 MANYARA
Number and Percent of Households
Eating Fish Once Per Week
by District



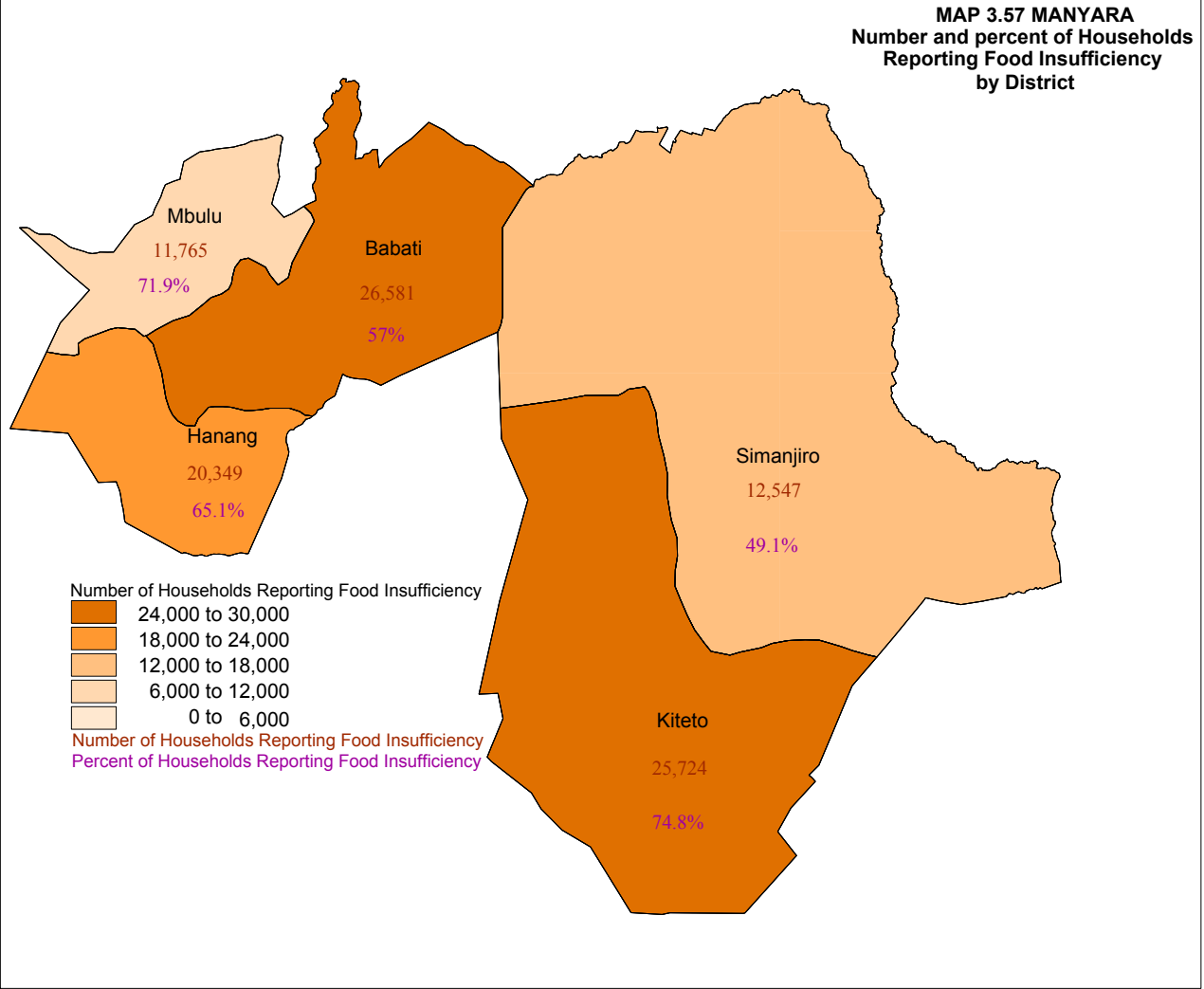
Simanjiro district has the highest percent of households that have problems in satisfying their household food requirements (36.6 percent of the agricultural households always or often having food problems). The percentage of households with food problems is also higher in Mbulu and Hanang districts (Chart 3.140b and Map 3.56).

3.13.10 Main Sources of Cash Income

The main cash income for the households in Manyara region was from selling food crops (35.2 percent of smallholder households), followed by sales of livestock (17.4%), other casual earnings (15.0%), businesses (9.2%), cash crops (8.4%), forest products (6.3%), wages and salaries (2.8%), remittance (1.9%) and livestock products (1.6%). Only 0.2% of smallholder households reported fishing as their main source of income, followed by other activities (2%) (Chart 3.141).



MAP 3.57 MANYARA
Number and percent of Households
Reporting Food Insufficiency
by District



MANYARA PROFILES

This section presents the status of crops and livestock production, access to natural resources and services, demography and poverty for both the region as a whole and for each district.

4.1 Manyara Region Profile

The region profile describes the status of the Agriculture sector in the region and compares it with other regions in the country.

4.2 District Profiles

The following district profiles highlight the characteristics of each district and compares them in relation to population, main crops and livestock, production and productivity, access to services and resources and levels of poverty.

4.2.1 Babati

Babati district had the largest number of agricultural households in the region and it had one of the highest percent of households involved in smallholder agriculture in the region. It was the second highest district with smallholders involved in crop farming only and the third with smallholders involved in crop and livestock production. It had a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Babati district was annual crop farming, followed by off farm income and livestock keeping/herding. However, the district had the least percent of households with no off-farm activities and the highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Babati had a relatively high percent of female headed households (38%) and it had the second highest average age of the household head. Its average household size of 5 members per household was lower than the average for the region. Babati has the highest literacy rate for agricultural household members (73%) and this was reflected by the concomitant relatively high level of school attendance in the region. The literacy rate for the heads of household was also the highest in the region.

It has the smallest utilized land area per household (2 ha) and the allocated area is not fully utilised indicating a low level of land pressure. The total planted area is the second greatest in the region due to the presence of good wet and dry seasons, however it has medium planted area per household as compared to other districts.

The district was the second important for maize production in the region with a planted area of 35,491 ha; however the planted area per household was the second lowest in the region. Paddy production was very important with a planted area of 1,817 hectares and the production of sorghum was the highest in the region. Babati had the highest wheat production (990 ha) among the three districts that grew the crop. Cassava production was the highest and accounted for 34 percent of the quantity harvested in the region. The district had the least planted area of Irish potatoes (5 ha) and it was among the two districts in the region that grew this crop. The production of beans in Babati was much higher than in other districts in the region with a planted area of 9,726 ha. Oilseed crops are important in Babati and the second highest with groundnuts in the region. Vegetable production was important in the district. It had the largest area planted with tomatoes (489 ha) accounted for 100 percent of the tomato production. Tobacco was the only traditional cash crop grown in the district (30 ha) and in the region.

Compared to other districts in the region, Babati has a moderate planted area with permanent crops which were dominated by pigeon peas (19,096 ha), banana (4,393 ha) and coffee (1,041 ha). Other permanent crops were either not grown or were grown in very small quantities.

As with other districts in the region, most land clearing and preparation was done by hand, however slightly more land preparation was done by oxen compared to most other districts.

The use of inputs in the region was very small, however district differences existed. Babati had the second largest area planted with improved seed in Manyara region and this was due to the high planted area of vegetables. The district had the second largest area planted with the application of fertilizers (farm yard manure, compost and inorganic fertiliser), however most of this is farm yard manure. Compared to other districts in the region, Babati district had the second highest level of insecticide use. The use of fungicides was also the second highest in the region. Also the district had the second highest use of herbicide in the region. It had the largest irrigated area (2,928) ha. The most common source of water for irrigation was from rivers using gravity. Flood and bucket were the most common means of water application.

The most common method of crop storage was the locally made traditional crib. The proportion of households storing crops in the district was higher than in other districts in the region. The district had the largest number of households selling crops, however for those who did not sell, the main reason for not selling was insufficient production. The second highest percent of households processing crops in Manyara region was found in Babati district, most of the processing was done by neighbours machine. The district had the third highest percent of households selling processed crops to neighbours in the region and no sales were made to traders on farm. Although very small, access to credit in the district was to women headed households and the main sources of credits were unspecified.

A comparatively large number of households received extension services in Babati and all the service was from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming was important in Babati (with 206,885 planted trees) and most of the trees were Gravellia with some Albizia and Senna species. The highest proportion of households with erosion control and water harvesting structures was found in Babati district and was most of these were erosion control bunds, however it also had high number of vetiver grass strips, water harvesting bunds and tree belts than other districts.

The district had the largest number of cattle in the region and most of them were indigenous. Goat production was the second largest in the region; however it was the second least district with population of sheep in the region. It had the second largest number of pigs in the region and the largest number of chickens. The district had no layers. The district had high numbers of ducks, moderate number of donkeys and small number of rabbits. It had second largest number of households that reported Tsetse and tick problems and it had the third largest number of households de-worming livestock. The use of draft animals in the district was high while fish farming was not practiced.

It had amongst the best access to primary schools and feeder roads compared to other districts. However, it had one of the worst access to primary markets and tarmac roads.

Babati district had the second least percent of households without toilet facilities and it had the second highest percent of households owning bicycles, vehicles, mobile phones and was the third in regard to tv/video. It had the second smallest number of households using mains electricity in the region. The most common source of energy for lighting was the wick lamp and practically all households used firewood for cooking. The district had the smallest percent of households with grass roofs and 36 percent of households had iron sheet roofs. The most common source of drinking water was from piped water. It had the highest percent of households having three and two meals per day and the lowest percent having 1 meal per day. The district had the lowest percent of households that did not eat meat or fish during the week prior to enumeration; however most households seldom had problems with food satisfaction.

4.2.2 Hanang

Hanang district had the third largest number of agricultural households in the region and it had the highest percentage of households involved in smallholder agriculture. Most smallholders were involved in crop and livestock production, followed by livestock keeping/herding. It had a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Hanang district was annual crop farming, followed by livestock keeping/herding. The district had the highest percent of households with no off-farm activities although it had the least percent of households with more than one member with off-farm income. Compared to other districts in the region, Hanang had a relatively low percent of female headed households (15%) and it had one of the highest average age of the household head in the region. Its household size of 6 members per household was average for the region. Hanang had a comparatively high literacy rate for agricultural household members and this was reflected by the district having the highest level of school attendance in the region.

It has a moderate utilized land area per household (4ha) and 98 percent of the allocated area is currently being utilised. The district has the second largest planted area in the region, and the third largest planted area per household (0.9ha in the long rainy season and 0.6ha in the short rainy season).

The district was moderately important for maize production in the region with a planted area of 35,232 ha, and the planted area per maize growing household was also moderate for the region. Paddy was not grown in the district. The district had the third largest area planted with sorghum in the region with 1,179 hectares. Though small, cassava production is the highest in the region with a planted area of 316 hectares. Irish potatoes are not grown in the district. The production of beans in Hanang, district was the highest in the region with a planted area of 12,945ha. Hanang district has the third largest groundnut planted area in Manyara region with a planted area per groundnut growing household of 0.3 ha. Vegetable production was moderately important in the district. Although small, it had the third largest planted area with tomatoes (15 ha). Traditional cash crops (e.g. tobacco and cotton) were not grown in the district.

Compared to other districts in the region, Hanang had the third largest planted area with permanent crops which were dominated by pigeon peas (31,391 ha), bananas (156 ha), oranges (130 ha) and guava (156 ha). Other permanent crops were either not grown or were grown in very small quantities.

As with most districts in the region, most land clearing and preparation was done by oxen, with the highest amount of land preparation in Hanang district being done by oxen.

The use of inputs in the region was very small, however district differences existed. Hanang had the third largest area planted with improved seeds in the region and had the least proportion of households using improved seeds. The district had the third largest planted area with the application of fertilizers (farm yard manure, compost and inorganic fertiliser), however most of these were farm yard manure. Compared to other districts in the region, Hanang district had the highest level of insecticide use. The use of fungicides, although small, was the highest compared to other districts. Application of herbicides was high. It had the second least irrigated area (709 ha). The most common source of water for irrigation was from canals using gravity. Flood was the major means of water application.

The most common method of crop storage in Hanang district was the locally made traditional crib. The proportion of households storing crops in the district was relatively high. Hanang district was one of the districts with a moderate number of households selling crops, however for those that did not sell, the main reason for not selling was insufficient production. Hanang was among the districts with the highest percent of households processing crops in Manyara region and most of the processing was done by neighbours machine. The district was the only one with households selling processed crops to marketing cooperatives and no sales were made to farmers associations, secondary markets or large scale farms. Although very small, access to credit in the district was to men headed households and the main sources were “family, friends and relatives”.

A comparatively small number of households received extension services in Hanang district and all the service was from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming was not important in Hanang (with 1,227 planted trees) and most of the trees were Gravelis and Senna species. The third highest proportion of households with erosion control and water harvesting structures was found in Hanang district and most of these were erosion control bunds and water harvesting bunds, however it also had a number of drainage ditches and vetiver grass.

The district had the second largest number of cattle in the region and almost all of them were indigenous. Goat production was moderate compared to other districts; however it had the third largest population of sheep in the region. It had the third largest number of pigs in the region and a large number of chickens. Some ducks, many donkeys but no rabbits were found in the district. A few households reported tsetse fly problems and many reported tick problems in Hanang district and it had the second least number of households de-worming livestock. The district had the second largest number of households using draft animals in the region. Fish farming was not practiced in the district.

It has amongst the poorest access to secondary schools, hospitals, district capital and tertiary market compared to other districts. It also had one of the worst access to tarmac road.

The percentage of households without toilet facility in Hanang district was 14.5 percent and was among the districts with the highest percent of households owning wheel barrows. Also, the district had the lowest percentage of households with vehicles, bicycles, tv/video and mobile phones. It had the second largest number of households using mains electricity in the region. The most common source of energy for lighting was the wick lamp and practically all households used

firewood for cooking. The roofing material for most of the households in the district was grass/leaves (40.7%) and iron sheets (24%). The most common source of drinking water was from piped water. It was one of the districts with the second highest percent of households having two meals per day. The district had the second highest percent of households that did not eat meat and the second least district that did not eat fish during the week prior to enumeration, however most households seldom had problems with food satisfaction.

4.2.3 Mbulu

Mbulu district had the least number of agricultural households in the region and it had one of the second highest percent of households involved in smallholder agriculture in the region. Most smallholders were involved in crop and livestock production, followed by crop only, livestock only production and pastoralists.

The most important livelihood activity for smallholder households in Mbulu district was annual crop farming, followed by livestock keeping/herding. However, the district has the second highest percent of households with off-farm activities and the second lowest percent of households with more than one member with off-farm income. Compared to other districts in the region, Mbulu had the least percent of female headed households (12%) and it had one of the highest average age of the household head in the region. Its average household size of 6 members per household was average for the region. Mbulu has the second highest literacy rate for agricultural household members and this was reflected by the concomitant relatively high level of school attendance in the region. The literacy rate for the heads of household was also slightly higher than most of districts in the region.

It has a slightly higher utilized land area per household (8.4ha) than the regional average of 7.6 ha and 98 percent of the allocated area is currently being utilised. The total planted area is greater than in other districts in the region due to the presence of good wet and dry seasons, however it has the least planted area per household (0.5ha) attributed to the high number of smallholders in the district.

The district was moderately important for maize production in the region with a planted area of over 22,818 ha, however the planted area per household was 0.7 ha which was the least in the region. Paddy was not grown in the district. The district had the second highest production of sorghum (1,423 ha). Irish potatoes were produced in small quantities while production of wheat was the least in the region. The district had the least planted area of cassava accounting for 10 percent of the cassava planted area in the region. The production of beans in Mbulu was the second highest in the region with a planted area of 12,764 ha. Oilseed crops were not important in Mbulu with mainly sunflower grown (799 ha) accounting for 12 percent of the total planted area in the region. Vegetable production was not important in the district. Traditional crops (tobacco and cotton) were not grown in the district.

Permanent crops were not important in Mbulu district (1.3% of the total permanent crop planted area in Manyara region was found in the district). The most prominent permanent crops in the district included bananas (239 ha) and coffee (144 ha). Other permanent crops were either not grown or were grown in very small quantities.

As with other districts in the region, most land clearing and preparation was done by hand and large land preparation was done by oxen.

The use of inputs in the region was very small, however district differences existed. Mbulu had the smallest area planted with improved seeds in Manyara region and this was due to the dominance of permanent crops which do not need frequent planting. The district had the largest area planted with the application of fertilizers (farm yard manure, compost and inorganic fertiliser), however most of these were farm yard manure. Compared to other districts in the region, Mbulu district had the smallest area applied with herbicides and fungicides. The use of pesticides was relatively moderate. It had the second largest irrigated area (1,401 ha). The most common source of water for irrigation was from rivers using hand bucket. Bucket/watering cans was the most common means of water application and a very small amount of flood irrigation was also used.

The most common method of crop storage in Mbulu was the locally made traditional crib, however the proportion of households storing crops in the district was the third highest in the region. The district had the second least percent of households selling crops, however for those that did not sell, the main reason for not selling was insufficient production. Mbulu district had the highest percent of households processing crops in the region and most of the processing was done to neighbours machine. However, the district had the highest percent of households processing crops by trader. The district had the lowest percent of households selling processed crops. No agricultural household accessed credit in the district.

A comparatively smaller number of households received extension services in Mbulu district and most of the service was from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming was important in Mbulu district (with 94,189 planted trees) and most of these were Gravellia with some Eucalyptus species. The second highest proportion of households with water harvesting bunds was found in Mbulu district and it also had the second largest number of erosion control bunds.

The district had a moderate number of cattle in the region and most of these were indigenous. Goat and sheep production was moderate compared to other districts. It had the largest number of pigs in the region and the second largest number of chickens, all of which are indigenous. Virtually all layers were found in the district. The district had small number of ducks, however it had no rabbits and a large number of turkeys. A number of households reported tsetse fly and tick problems. The district had the second largest number of household de-worming livestock in Mbulu. The use of draft animals in the district was high with (63%) of household using draft animals. A small number of households practiced fish farming, however the district was the only one practicing fish farming in the region.

It had amongst the best access to feeder roads, primary schools, and all weather roads compared to other districts. However, it had one of the worst accesses to tarmac roads, district capital and hospitals.

Mbulu district had the lowest percent of households with no toilet facilities and it had no households owning landline and small percentage of households had with vehicles, wheel barrows, Tv/video and mobile phones. The use of mains electricity in the district was nonexistence. The most common source of energy for lighting was the wick lamp and practically all households used firewood for cooking. The district had a low percent of households with grass roofs (31.9%) with 15 percent of households having iron sheets. The most common source of drinking water was the unprotected well. Twenty two point eight percent of the households in the district reported having two meals per day and

virtually no household reported having more than four meals per day with majority of households (76.8%) having three meals per day. The district had the highest percent of households that did not eat meat or fish during the week prior to enumeration; however few households seldom had problems with food satisfaction.

4.2.4 Simanjiro

Simanjiro district had the second least number of households in the region and it had the least percent of households involved in smallholder agriculture in the region. Most smallholders were involved in crop farming only, followed by crop and livestock production. It had a very small number of livestock only and pastoralists in the district.

The most important livelihood activity for smallholder households in Simanjiro district was annual crop farming, followed by livestock keeping/herding and off farm income. However, the district had the second lowest percent of households with off-farm activities and also, the second lowest percent of households with more than one member with off-farm income. Compared to other districts in the region, Simanjiro had a relatively high percent of female headed households (23%) and it had one of the lowest average age of the household head. Its average household size of 5 members per household was average for the region. Simanjiro has a comparatively low literacy rate for agricultural household members and this was reflected by the concomitant relatively low level of school attendance in the region. The literacy rate for the heads of household was also slightly low than most of districts in the region.

It has the smallest utilized land area per household (0.8ha) and the allocated area is fully utilised indicating a high level of land pressure. The total planted area is greater than in other districts in the region due to the presence of good wet and dry seasons, however it has the second lowest planted area per household (1.2ha) attributed to the high number of smallholders in the district.

The district was moderately important for maize production in the region with a planted area of over 23,831 ha, however the planted area per household was the second highest in the region. Paddy production was not important with a planted area of only 213 hectares and the production of sorghum was very small. Simanjiro was among the districts that did not produce wheat, Irish potatoes or cassava. The production of beans in Simanjiro was moderate compared to other districts in the region with a planted area of 8,127 hectares. Oilseed crops were not important in Simanjiro and very small quantities of simsim and groundnuts were grown in the district. Vegetable production was important in the district. It had the largest area planted with tomatoes (62 ha) and onions (178 ha) in the region and accounted for 35 percent of the tomato production, 70 percent of the onion production in the region. Traditional cash crops (e.g. tobacco and cotton) were not grown in the district.

Compared to other districts in the region, Simanjiro had the area smallest area planted with permanent crops which were dominated by bananas (125 ha), guava (31 ha) and pigeon peas (21 ha). Other permanent crops were either not grown or are grown in very small quantities.

As with other districts in the region, most land clearing and preparation was done by hand, however slightly more land preparation was done by oxen compared to most other districts.

The use of inputs in the region was very small, however district differences existed. Simanjiro had the largest area planted with improved seeds in Manyara region. The district had the smallest area planted with the application of fertilizers (farm

yard manure, compost and inorganic fertiliser), however most were farm yard manure. Compared to other districts in the region, Simanjiro district had low level of insecticides use. The use of fungicides and herbicides were low compared to other districts. It had the the third largest irrigated area in the region (1,356 ha). The most common source of water for irrigation was from rivers using gravity. Flood was the most common means of water application.

The most common method of crop storage was the locally made traditional crib; however the proportion of households not storing crops was the highest in the region. The district had the lowest number of households selling crops, however for those that did not sell, the main reason for not selling was insufficient production. The least percent of households processing crops in Manyara region was found in Simanjiro district and most of the processing was done by neighbours machine. The district had a high percent of households selling processed crops to neighbours and no sales were made to traders on farm. Although very small, access to credit in the district was to both men and women headed households and the main sources of credit were family, friends and relatives.

A comparatively large number of households received extension services in Simanjiro and all the service was from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming was important in Simanjiro (with 541 planted trees) and most of these were *Azadirachta* species with some *Senna* species and *Leucena*. The lowest proportion of households with erosion control and water harvesting structures was found in Simanjiro district and most of these were erosion control bunds; however it also has high number of tree belts, water harvesting bunds and drainage ditches.

The district has the third largest number of cattle in the region and most of them were indigenous. Goat and sheep production were the largest in the region with a total number of 317,648 goats and 143,162 sheep; It had the smallest number of pigs and chicken in the region. Although small, the district had the second largest number of broilers in the region. The district had a moderate number of ducks, rabbits and the largest number of donkeys. The largest number of households reporting Tsetse fly and tick problems was in Simanjiro and it had the largest number of households deworming livestock. The use of draft animals in the district was very small and fish farming was practiced

It was amongst the districts with the best access to feeder roads, primary schools and all weather roads compared to other districts. However, it had one of the worst accesses to district capital, tertiary market and tarmac roads.

Simanjiro district had the highest percent of households with no toilet facilities and it had the lowest percent of households owning pressing iron, vehicles, tv/video, land line and mobile phones. It had the second lowest number of households using mains electricity in the region. The most common source of energy for lighting was the wick lamp and practically all households used firewood for cooking. The district had the second smallest percent of households with grass roofs, with 27 percent of households having iron sheets. The most common source of drinking water was from surface water. It had the highest percent of households having two meals per day and the lowest percent with 3 meals per day. The district had the second lowest percent of households that did not eat meat and was the second highest percent of household that did not eat fish during the week prior to enumeration, however very few households seldom had problems with food satisfaction.

4.2.5 Kiteto

Kiteto district had the second largest number of agricultural households in the region and it had a high percentage of households involved in smallholder agriculture in the region. Most smallholders were involved in crop and livestock production, followed by crop only. It had a very small number of livestock only households and no pastoralists were found in the district.

The most important livelihood activity for smallholder households in Kiteto district was annual crop farming, followed by off farm Income. The district has the third highest percent of households with no off-farm activities and it has the third highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Kiteto had a relatively high percent of female headed households (25%) and it had one of the highest average age of the household head in the region. Its an average household size of 5 members per household was below the average for the region. Kiteto has a comparatively low literacy rate among smallholder households. The literacy rate for the heads of household was the second least in the region.

It has a moderate utilized land area per household (10ha) and 91 percent of the allocated area is currently being utilised. The district has the largest planted area in the region, and the third largest planted area per household (2.3ha).

The district was important for maize production in the region with a planted area of over 69,186 ha, and the planted area per household was the highest in the region. The district had no area planted with paddy. Sorghum was grown in small quantities. Cassava production was moderately high, accounting for 30 percent of the quantity harvested in the region. The district had no planted area for Irish potatoes. The production of beans in Kiteto was the least in the region with a planted area of 2,092 ha. Kiteto district had the largest area planted with groundnuts in Manyara region with the area planted per groundnut growing household of 0.45 ha. Vegetable production was not important in the district and traditional cash crops (e.g. tobacco and cotton) were not grown

Compared to other districts in the region, Kiteto had the second largest planted area of permanent crops which were dominated by pigeon peas (6,226 ha), bananas (35 ha) and Mpesheni (24 ha). Other permanent crops were either not grown or were grown in very small quantities.

As with other districts in the region, most land clearing and preparation was done by hand, however a very small amount of land preparation was done by oxen.

The use of inputs in the region was very small, however district differences existed. Kiteto had the largest area planted with improved seeds in the region as well as the lowest proportion of households using improved seeds. The district had the smallest area planted with the application of fertilizers (farm yard manure, compost and inorganic fertilisers), however most of these were farm yard manure. Compared to other districts in the region, Kiteto district had a moderate level of insecticides use. The use of fungicides in the district was very low. Application of herbicides was moderate. It had the smallest irrigated area (662 ha). The most common source of water for irrigation was from pipe water using hand bucket. Bucket/watering can were the most common means of water application.

The most common method of crop storage in Kiteto district was the sacks/open drum, however the proportion of households not storing crops in the district was relatively low compared to other districts in the region. Kiteto district was one of the districts with a moderate number of households selling crops, however those that did not sell, the main reason for not selling was insufficient production. Kiteto was among the districts with high percent of households processing crops in Manyara region and most of the processing was done by neighbours machine. The district had no access to credit facilities.

A comparatively moderate number of households received extension services in Kiteto district and all of it was from the government. The quality of extension services was rated between good and average by the majority of the households.

Tree farming was important in Kiteto (with 9,089 planted trees) and most of these were Senna species and Leucena species. The least proportion of households with erosion control and water harvesting structures were found in Kiteto district and most of these were erosion control bunds and tree belts, however it also had the a number of drainage ditches.

The district had the smallest number of cattle, goats and sheep in the region and most of those were indigenous. It had the second smallest number of pigs in the region and a second smallest number of chickens. It had the largest number of ducks, rabbits and a moderate number of donkeys but a large number of turkeys. A number of households reported tsetse fly and tick problems and it had the least number of households de-worming livestock. The district had the least number of households using draft animals in the region. A very small number of households practiced fish farming.

It had amongst the best access to primary schools and feeder roads compared to other districts. However, it had one of the worst accesses to tarmac road.

The percentages of households without toilet facility in Kiteto district was 23.1 percent and it was among the districts with the lowest percent of households owning pressing iron, vehicles, bicycles, tv/video and mobile phones. It had the third largest number of households using mains electricity in the region. The most common source of energy for lighting was the wick lamp and practically all households used firewood for cooking. The roofing material for most of the households in the district was iron sheets (60%) and asbestos (22.6%). The most common source of drinking water was from unprotected wells. It is one of the districts with moderate percent of households having two and three meals per day. The district had moderate percent of households that did not eat meat and high percent of household that did not eat fish during the week prior to enumeration, however small number of households seldom had problems with food satisfaction.

4. APPENDICES

Appendix I	Tabulation List.....	101
Appendix II	Tables.....	119
Appendix III	Questionnaires	264

APPENDIX I: CROP TABULATION

TYPE OF AGRICULTURE HOUSEHOLD	119
2.1 Number of Agriculture households by type of household and District during 2002/03 Agriculture Year	120
2.2 Number of Agriculture Households By Type of Holding and District, 2002/03 Agricultural Year	120
NUMBER OF AGRICULTURE HOUSEHOLDS	121
3.0: Number of Agricultural Households and Average Household Size By Sex of the Head of Household and District, 2002/03 Agricultural Year	122
RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES	123
3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District	124
3.1a First Most Importance.....	124
3.1b Second Most Importance	124
3.1c Third Most Importance	124
3.1d Fourth Most Importance	124
3.1e Fifth Most Importance	125
3.1f Sixth Most Importance.....	125
3.1g Seventh Most Importance	125
HOUSEHOLDS DEMOGRAPHYS.....	127
3.2 Number of Agricultural Household Members By Sex and Age Group, 2002/03 Agricultural Year	128
3.3 Number of Agricultural Household Members By Sex and Age Group, 2002/03 Agricultural Year	128
3.4 Number of Agricultural Household Members By Sex and District, 2002/03 Agricultural Year	129
3.5 Number of Agriculture Household Members 5 years and above Who Can Read and Write Languages By Type of Language and District, 2002/03 Agricultural Year	129
3.6 Number of Agricultural Household Members 5 years and above By School Attendancy and District , 2002/03 Agricultural Year	130
3.7 Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year	130

3.8	Number of Agricultural Household Members By Level of involvement in Farming Activivty and District, 2002/03 Agricultural Year	131
3.9	Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year	131
3.10	Number of Agricultural Households and Average Household Size By Sex of the Head of Household and District, 2002/03 Agricultural Year	132
3.11	Number of Agricultural Households Involved in Off Farm Income Generating Activity By Number of Off Farm Income Activities and District, 2002/03 Agricultural Year	132
3.12	Number of Heads of Agricultural Households By Maximum Education Level Attained and District, 2002/03 Agricultural Year.....	133
3.13	Mean, Meadian, Mode of Age of Head of Agricultural Household and District.....	133
3.14	Literacy Rate of Heads of Households by Sex and District.....	133
3.15	Number of Heads of Agricultural Households reporting Literacy levels by Sex of head and District, 2002/03 Agricultural Year	133
LAND ACCESS/OWNERSHIP.....		135
4.1	Number of Agricultural Households By Type of Land Ownership/Tenure and District, 2002/03 Agricultural Year	136
4.2	Area of Land by type of Ownership/Tenure (Hectare) and District, 2002/03 Agricultural Year	136
LAND USE		137
5.1	Area of Land by type of Land Use and District during 2002/03 Agricultural Year	138
5.2	Number of Agricultural Households By Type of Land Use and District, 2002/03 Agricultural Year	138
5.3	Number of Agricultural Households by Whether All Land Available to the Household Was Used and District, 2002/03 Agricultural Year	139
5.4	Number of Agricultural Households by Whether they Consider Having Sufficient Land for the Household and District, 2002/03 Agricultural Year	139
5.5	Number of Agricultural Households by whether Female Members of the Household Own or Have Customary Right to Land and District, 2002/03 Agricultural Year	139
COMMUNIAL RESOURCES.....		141
6.1	Average Distance (Km) from Agriculture Household to Communal Resources by Name of Communal Resource, Season and District, 2002/03 Agricultural Year.....	142

6.2	Number of Agricultural Households with Access to Water for Humans by type of Utilization and District, 2002/03 Agricultural Year	143
6.3	Number of Agricultural Households with Access to Water for Livestock by type of Utilization and District, 2002/03 Agricultural Year	143
6.4	Number of Agricultural Households with Access to Communal Grazing by type of Utilization and District, 2002/03 Agricultural Year	144
6.5	Number of Agricultural Households with Access to Communal Firewood by type of Utilization and District, 2002/03 Agricultural Year	144
6.6	Number of Agricultural Households with Access to Wood for Charcoal by type of Utilization and District, 2002/03 Agricultural Year	145
6.7	Number of Agricultural Households with Access to Building Poles by type of Utilization and District, 2002/03 Agricultural Year	145
6.8	Number of Agricultural Households with Access to Forest For Bees Products by type of Utilization and District, 2002/03 Agricultural Year	146
6.9	Number of Agricultural Households with Access to Hunting Grounds by type of Utilization and District, 2002/03 Agricultural Year	146
6.10	Number of Agricultural Households with Access to Fishing Resources by type of Utilization and District, 2002/03 Agricultural Year	147
TOTAL ANNUAL CROP AND VEGETATION PRODUCTION – LONG AND SHORT RAINY SEASON		149
7.1 & 7.2a	Number of Households and Planted Area By District-SHORT RAINY SEASON	150
7.1 & 7.2b	Number of Crop Growing Households Planting Crops By Season and District - SHORT RAINY SEASON	150
7.1 & 7.2c	TOTAL Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agriculture Year, Manyara Region	151
7.1 & 7.2d	TOTAL Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agriculture Year, Manyara Region	152
7.1 & 7.2e	Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-SHORT RAINY SEASON	153
7.1 & 7.2f	Total Number of Agriculture Households and Planted Area by Fertilizer Use and District for the 2002/03 agriculture Year - Long and Short Rainy Season, Manyara Region	153
7.1 & 7.2g	Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year SHORT RAINY SEASON	153
7.1 & 7.2h	Number of Crop Growing Households and Planted Area By Pesticide Use and District During 2002/03 Crop Year in SHORT RAINY SEASON	154
7.1 & 7.2i	Number of Crop Growing Households and Planted Area By Herbicide Use and District During 2002/03 Crop Year SHORT RAINY SEASON	154

7.1 & 7.2j Number of Crop Growing Households and Planted Area By Fungicide Use and District
During 2002/03 Crop Year SHORT RAINY SEASON 154

7.1& 7.2k Number of Crop Growing Households and Planted Area By Improved Seed Use
and DistrictDuring 2002/03 Crop Year - SHORT RAINY SEASON 154

**ANNUAL CROP AND VEGE PRODUCTION -
SHORT RAINY SEASON 155**

7.1a Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil
Preparation and District During 2002/03 Crop Year-SHORT RAINY SEASON..... 156

7.1b Number of Crop Growing Households and Planted Area By Fertilizer Use and District
During 2002/03 Crop Year-SHORT RAINY SEASON 156

7.1c Number of Crop Growing Households and Planted Area By Irrigation Use and District
During 2002/03 Crop Year SHORT RAINY SEASON 156

7.1d Number of Crop Growing Households and Planted Area By Pesticide Use and District
During 2002/03 Crop Year in SHORT RAINY SEASON 157

7.1e Number of Crop Growing Households and Planted Area By Herbicide Use and
District During 2002/03 Crop Year SHORT RAINY SEASON 157

7.1f Number of Crop Growing Households and Planted Area By Fungicide Use and
District During 2002/03 Crop Year SHORT RAINY SEASON 157

7.1g Number of Crop Growing Households and Planted Area By Improved Seed Use and
DistrictDuring 2002/03 Crop Year - SHORT RAINY SEASON 157

ANNUAL CROP AND VEGE PRODUCTION- LONG RAINY SEASON 159

7.2a Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil
Preparation and District During 2002/03 Crop Year-LONG RAINY SEASON 160

7.2b Number of Crop Growing Households and Planted Area By Fertilizer Use and District
During 2002/03 Crop Year-LONG RAINY SEASON 160

7.2c Number of Crop Growing Households and Planted Area By Irrigation Use and District
During 2002/03 Crop Year LONG RAINY SEASON 160

7.2d Number of Crop Growing Households and Planted Area By Pesticide Use and District During
2002/03 Crop Year in LONG RAINY SEASON 160

7.2e Number of Crop Growing Households and Planted Area By Herbicide Use and District
During 2002/03 Crop Year LONG RAINY SEASON 161

7.2f: Number of Crop Producing Households Reporting Selling Agricultural Products During
2003/04 By District..... 161

7.2g Number of Crop Growing Households and Planted Area By Fungicide Use and District
During 2002/03 Crop Year LONG RAINY SEASON 161

7.2h	Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - LONG RAINY SEASON.....	161
7.2.1	Number of Agricultural Households, Area Planted (ha) and Quantity of Maize Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	162
7.2.2	Number of Agricultural Households, Area Planted (ha) and Quantity of Paddy Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	162
7.2.3	Number of Agricultural Households, Area Planted (ha) and Quantity of Sorghum Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	162
7.2.4	Number of Agricultural Households, Area Planted (ha) and Quantity of Fingermillet Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	162
7.2.5	Number of Agricultural Households, Area Planted (ha) and Quantity of Bulrushmillets Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	163
7.2.6	Number of Agricultural Households, Area Planted (ha) and Quantity of Wheat Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	163
7.2.7	Number of Agricultural Households, Area Planted (ha) and Quantity of Barley Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	163
7.2.8	Number of Agricultural Households, Area Planted (ha) and Quantity of Cassava Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	163
7.2.9	Number of Agricultural Households, Area Planted (ha) and Quantity of Sweet potatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	164
7.2.10	Number of Agricultural Households, Area Planted (ha) and Quantity of Irish potatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	164
7.2.11	Number of Agricultural Households, Area Planted (ha) and Quantity of Yams Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	164
7.2.11	Number of Agricultural Households, Area Planted (ha) and Quantity of Cocoyams Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	164
7.2.12	Number of Agricultural Households, Area Planted (ha) and Quantity of Mungbeans Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	165
7.2.13	Number of Agricultural Households, Area Planted (ha) and Quantity of Beans Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	165
7.2.14	Number of Agricultural Households, Area Planted (ha) and Quantity of Cowpeas Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	165
7.2.15	Number of Agricultural Households, Area Planted (ha) and Quantity of Greengram Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	165
7.2.16	Number of Agricultural Households, Area Planted (ha) and Quantity of Chick peas Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	166

7.2.17 Number of Agricultural Households, Area Planted (ha) and Quantity of Bambaranuts Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	166
7.2.18 Number of Agricultural Households, Area Planted (ha) and Quantity of Fieldpeas Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	166
7.2.19 Number of Agricultural Households, Area Planted (ha) and Quantity of Sunflower Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	166
7.2.20 Number of Agricultural Households, Area Planted (ha) and Quantity of Simsim Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	167
7.2.21 Number of Agricultural Households, Area Planted (ha) and Quantity of Groundnuts Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	167
7.2.22 Number of Agricultural Households, Area Planted (ha) and Quantity of Castor oil Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	167
7.2.23 Number of Agricultural Households, Area Planted (ha) and Quantity of Soya beans Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	167
7.2.24 Number of Agricultural Households, Area Planted (ha) and Quantity of Okra Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	168
7.2.25 Number of Agricultural Households, Area Planted (ha) and Quantity of Bitter Aubergine Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	168
7.2.26 Number of Agricultural Households, Area Planted (ha) and Quantity of Onion Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	168
7.2.27 Number of Agricultural Households, Area Planted (ha) and Quantity of Cabbage Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	168
7.2.28 Number of Agricultural Households, Area Planted (ha) and Quantity of Tomatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	169
7.2.29 Number of Agricultural Households, Area Planted (ha) and Quantity of Spinnach Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	169
7.2.30 Number of Agricultural Households, Area Planted (ha) and Quantity of Carrot Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	169
7.2.31 Number of Agricultural Households, Area Planted (ha) and Quantity of Chillies Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	169
7.2.32 Number of Agricultural Households, Area Planted (ha) and Quantity of Amaranths Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	170
7.2.33 Number of Agricultural Households, Area Planted (ha) and Quantity of Pumpkins Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	170

7.2.34	Number of Agricultural Households, Area Planted (ha) and Quantity of Cucumber Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	170
7.2.35	Number of Agricultural Households, Area Planted (ha) and Quantity of Eggplant Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	170
7.2.36	Number of Agricultural Households, Area Planted (ha) and Quantity of Water Mellon Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	171
7.2.37	Number of Agricultural Households, Area Planted (ha) and Quantity of Cauliflower Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	171
7.2.38	Number of Agricultural Households, Area Planted (ha) and Quantity of Cotton Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	171
7.2.39	Number of Agricultural Households, Area Planted (ha) and Quantity of Tobacco Harvested (tons) by Season and District; 2002/03 Agricultural Year.....	171
PERMANENT CROPS		173
7.3	Number of households by Area planted (ha), Area harvested (ha) and Quantity harvested (tons).....	174
AGROPROCESSING.....		179
8.0a	Did tthe Household Process any Of the Products Harvested	180
8.0b	Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agriculture Year By Method of Processing and District.....	180
8.1.1b	Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2003/04 Agricultural Year By Use of Product and Crop	180
8.1.1c	Number of Crop Growing Households By Where Product Sold During 2002/03 Agriculture Year and District.....	181
8.1.1d	Number of Crop Growing Households By Main Product During 2002/03 Agriculture Year and District.....	181
8.1.1e	Number of Crop Growing Households By Use of Primary Processed Product During 2002/03 Agriculture Year and District	181
8.1.1f	Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2003/04 Agricultural Year By Location of Sale of Product and Crop	182
8.1.1g	Number of Crop Growing Households By By-Product During 2002/03 Agriculture Year and District.....	182
STORAGE.....		183
9.2a	Number of Households Storing Crops By Method of Storage and District.....	184
9.2b	Number of Households Storing Crops By Duration of Storage and District.....	184

9.2c	Number of Households Storing Crops By Main Purpose of Storage and District.....	184
9.2d	Number of Households Storing Crops By Estimated Storage Loss and District.....	184
9.2	Number of Households Storing Crops By Method of Storage and Crop Type	185
MARKETING		187
10.	Number of Crop Producing Households Reporting Selling Agricultural Products During 2003/04 By District.....	188
10.2	Number of Households Reporting Selling Crop By Main Marketing Problem By District ...	188
10.3	Number of Crop Producing Households Reporting Not Selling Agricultural Products During 2003/04 By Reason for Not Selling Crops By District.....	188
IRRIGATION/ EROSION CONTROL.....		189
11.1:	Number and Percent of Crop Growing Households Reporting of Practicing Irrigation During 2002/03 Agriculture Year By District	190
11.2:	Area of Irrigated and Non Irriga (ha) Land By District.....	190
11.3:	Number of Households Using Irrigation By Source of Irrigation Water During 2003/04 Agricultural Year By District.....	190
11.4:	Number of Households Using Irrigation By Method of Irrigation of Obtaining Water By District	190
11.5:	Number of Households Using Irrigation By Method of Irrigation Application By District...	191
11.5:	Number of Households Using Irrigation By Method of Irrigation Application By District...	191
11.6:	Number of Households With Erosion Control/Water Harvesting Facilities on their Land By District	191
11.7	Number of Erosion Control Harvesting Structures By Type and District	191
ACCESS TO FARM INPUTS/ IMPLEMENTS		193
12.1.1	Number of Agricultural Households Using Chemical Fertilizer by District, 2002/03 Agricultural Year	194
12.1.2	Number of Agricultural Households Using Farm Yard Manure by District, 2002/03 Agricultural Year	194
12.1.3	Number of Agricultural Households Using COMPOST Manure by District, 2002/03 Agricultural Year	194
12.1.4	Number of Agricultural Households Using Pesticides/Fungicides by District, 2002/03 Agricultural Year	194
12.1.5	Number of Agricultural Households Using Herbicides by District, 2002/03 Agricultural Year	195

12.1.6	Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year	195
12.1.7	Number of Agricultural Households and Source of Chemical Fertilizer by District, 2002/03 Agricultural Year	195
12.1.8	Number of Agricultural Households and Source of Farm Yard Manure by District, 2002/03 Agricultural Year	195
12.1.9	Number of Agricultural Households and Source of COMPOST Manure by District, 2002/03 Agricultural Year	196
12.1.10	Number of Agricultural Households and Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year	196
12.1.11	Number of Agricultural Households and Source of Herbicides by District, 2002/03 Agricultural Year	196
12.1.12	Number of Agricultural Households Source of Improved Seeds by District, 2002/03 Agricultural Year	197
12.1.13	Number of Agricultural Households and Distance to Source of Chemical Fertilizer by District, 2002/03 Agricultural Year.....	197
12.1.14	Number of Agricultural Households and Distance to Source of Farm Yard Manure by District, 2002/03 Agricultural Year.....	197
12.1.15	Number of Agricultural Households and Distance to Source of COMPOST Manure by District, 2002/03 Agricultural Year.....	198
12.1.16	Number of Agricultural Households and Distance to Source of Pesticides/ Fungicides by District, 2002/03 Agricultural Year.....	198
12.1.17	Number of Agricultural Households and Distance to Source of Herbicides by District, 2002/03 Agricultural Year	198
12.1.18	Number of Agricultural Households and Distance to Source of Improved Seeds by District, 2002/03 Agricultural Year	198
12.1.19	Number of Agricultural Households and Source of Finance for buying Chemical Fertilizer by District, 2002/03 Agricultural Year	199
12.1.20	Number of Agricultural Households and Source of Finance for buying Farm Yard Manure by District, 2002/03 Agricultural Year.....	199
12.1.21	Number of Agricultural Households and Source of Finance for buying COMPOST Manure by District, 2002/03 Agricultural Year.....	199
12.1.22	Number of Agricultural Households and Source of Finance for buying Pesticides/Fungicides by District, 2002/03 Agricultural Year.....	199
12.1.23	Number of Agricultural Households and Source of Finance for buying Herbicides by District, 2002/03 Agricultural Year.....	200

12.1.24 Number of Agricultural households and Source of Finance for buying Improved Seeds by District, 2002/03 Agricultural Year	201
12.1.25 Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03 Agricultural Year.....	201
12.1.26 Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year.....	200
12.1.27 Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year.....	201
12.1.28 Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District, 2002/03 Agricultural Year.....	201
12.1.29 Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year	201
12.1.30 Number of Agricultural Households and Reason for NOT using Improved Seeds by District, 2002/03 Agricultural Year	201
12.1.31 Number of Agricultural Households and Quality of Chemical Fertilizer by District, 2002/03 Agricultural Year	202
12.1.32 Number of Agricultural Households and Quality of Farm Yard Manure by District, 2002/03 Agricultural Year	202
12.1.33 Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03 Agricultural Year	202
12.1.34 Number of Agricultural Households and Quality of Pesticides/Fungicides by District, 2002/03 Agricultural Year	202
12.1.35 Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year	203
12.1.36 Number of Agricultural Households and Quality of Improved Seeds by District, 2002/03 Agricultural Year	203
12.1.37 Number of Agricultural Households With Plan to use Next Year Chemical Fertilizer by District, 2002/03 Agricultural Year	203
12.1.38 Number of Agricultural Households With Plan to use Next Year Farm Yard Manure by District, 2002/03 Agricultural Year	203
12.1.39 Number of Agricultural Households With Plan to use Next Year COMPOST Manure by District, 2002/03 Agricultural Year	204
12.1.40 Number of Agricultural Households With Plan to use Next Year Pesticides/Fungicides by District, 2002/03 Agricultural Year	204
12.1.41 Number of Agricultural Households With Plan to use Next Year Herbicides by District, 2002/03 Agricultural Year	204

12.1.42	Number of Agricultural Households using Improved Seeds by District, 2002/03 Agriculture Year	204
AGRICULTURE CREDIT		205
13.2a	Number of Households Receiving Credit By Sex of Household Member Receiving Credit By District.....	206
13.2b	Number of Households Receiving Credit By Source of Credit By District	206
13.2c	Number of Households Receiving Credit By Reason for Not Using Credit By District	206
13.2d	Number of Credit Facilities Received By Main Purpose of Credit and District.....	206
TREE FARMING AND AGROFORESTRY		207
14.1	Number of Households Having Planted Trees By District	208
14.2	Number of Households with Planted Trees on their Land and and Number of Trees by Planting Location and District	208
14.3	Number of Planted Trees By Species and District.....	208
14.4	Main Use of Trees By District	209
14.5	Second Use of Trees By District.....	209
14.6	Number of Households By Whether Village Have a Community Tree Planting Scheme By District	209
14.7	Number of Households By Distance to Community Planted Forest (Km) By District	210
14.8	Number of Households Involved in Community Tree Planting Scheme By Main Use and District	210
CROP EXTENTION		211
15.1	Number of Households Receiving Extension Messages By District	212
15.2	Number of Households By Quality of Extension Services By District	212
15.3	Number of Households By Source of Extension Messages By District	212
15.4	Number of Households By Receivingf Advice on Plant Spacing By Source of Messages By District	213
15.5	Number of Households By Receiving and Adopting Extension Messages By Type of Message and District	215
ANIMAL CONTRIBUTION TO CROP PRODUCTION		217
17.1	Number of Households Using Draft Animal to Cultivate Land By District.....	218
17.2	Type of Draft By Number Owened, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year	218

17.3	Type of Draft By Number Owned, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year	219
17.4	Number of Crop Growing Households Using Organic Fertilizer By Regio During 2002/03 Agriculture Year	219
17.5	Area of Farm Yard Manure and Compost Application By District During 2002/03 Agriculture Year	219
CATTLE PRODUCTION.....		221
18.1	Total Number of Households Rearing Cattle By District During 2002/03 Agriculture Year	222
18.2	Number of Cattle By Type and District as of 1st October, 2003	222
18.3.	Number of Households Rearing Cattle, Head of Cattle and Average Head per Household by Herd Size as of 2002/03.....	223
18.4	Number of Cattle by Category and Type of Cattle as of 1st October 2003	224
18.5	Number of Indigenous Cattle By Category and as of 1st October, 2003.....	224
18.6	Number of Indigenous Cattle By Category and as of 1st October, 2003.....	224
18.7	Number of Indigenous Cattle By Category and as of 1st October, 2003.....	225
18.8	Number of Indigenous Cattle By Category and as of 1st October, 2003.....	225
GOATS PRODUCTION		227
19.1	Number of Agriculture Households Rearing Goats By District during the 2002/03 Agriculture Year	228
19.2	Total Number of Goats by Type and District as of 2st October, 2003	228
19.3	Number of Households Rearing Goats, Herd of Goats and Average Head per Household by Herd Size as of 1st October, 2003	228
19.4	Total Number of Goats by Category and Type of Goat as of 1st October, 2003 and District	228
19.5	Number of Indigenous Goat by Category and District as of 1st October, 2003	229
19.6	Number of Improved Meat Goat by Category and District as of 1st October, 2003	229
19.7	Number of Improved Dairy Goat by Category and District as of 1st October, 2003	229
19.8	Number of Total Goat by Category and District as of 1st October, 2003	229
SHEEP PRODUCTION		231
20.1	Number of Households Rearing Sheep by District as of 1st October, 2002.0/ Agriculture Year	232

20.2	Number of Sheep by Type of Sheep and District as of 1st October, 2002/03	232
20.3	Number of Households Rearing Sheep, Herd of Sheep and Average Herd Per Household by Herd Size as of 1st October, 2002/03	233
20.4	Total Number of Sheep By Breed Type During the 2002/03 Agriculture Year	234
20.5	Total Number of Indigenous Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year	234
20.6	Total Number of Improved Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year	234
20.7	Total Number of Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year	234
PIGS PRODUCTION.....		235
21.1	Number of Households Raising Pig by District during 2002/03 Agriculture Year	236
21.1	Number of Households Raising Pig by District during 2002/03 Agriculture Year	236
21.2	Total Number of Pigs by Category of Pigs and District as of 1st October, 2003	236
21.3	Pig Offtake By Type of Pig and District.....	236
LIVESTOCK PESTS AND PARASITE CONTROL.....		237
22.1	Number and Percent of agricultural households reporting to have dewormed animals during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year.....	238
22.2	Number and Percent of agricultural households reporting to have dewormed animals during 2002/03 Agriculture Year by District and type of dewormed Livestock	238
22.3	Number and Percent of agricultural households reporting to have encountered tick problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year.....	238
22.4	Number and Percent of agricultural households by Method of Tick Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year	238
22.5	Number and Percent of agricultural households reporting to have encountered tsetse flies problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year.....	239
22.6	Number and Percent of agricultural households by Method of Tsetse flies Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year.....	239
OTHER LIVESTOCK.....		241
23.1	Total Number of Other Livestock by Breed and Type	242
23.2	Number of Households Rearing and number of Other Livestock by Type and District.....	242
23.3	Number of Chicken by Type and District.....	242

23.4	Number of households with chicken and Category of Chicken by District.....	242
23.5	Number of households with chicken and Category of Chicken by Flock Size.....	242
23.6	Number of households with chicken and Category of Chicken by District.....	242
FISH FARMING.....		243
28.1	Number of Agricultural Households involved in Fish Farming and District, 2002/03 Agricultural Year	244
28.2	Number of Agricultural Households By System of Farming and District, 2002/03 Agricultural Year	244
28.3	Number of Agricultural Households By Source of Fingerings and District, 2002/03 Agricultural Year	244
28.4	Number of Agricultural Households By Location of Selling Fish and District, 2002/03 Agricultural Year	244
28.5	Total Number of Fish Harvested by Type and District, 2002/03 Agricultural Year	244
LIVESTOCK EXTENSION		245
29.1a	Number of Agricultural Households Receiving Advice By Type of Service Provider and District, 2002/03 Agricultural Year.....	246
29.1b	Number of Agricultural Households Receiving Extension Advice on Feeds and Proper Feeding By Source and District, 2002/03 Agricultural Year.....	246
29.2	Number of Agricultural Households Receiving Extension Advice on Housing By Source and District, 2002/03 Agricultural Year	246
29.3	Number of Agricultural Households Receiving Extension Advice on Proper Milking By Source and District, 2002/03 Agricultural Year.....	247
29.4	Number of Agricultural Households Receiving Extension Advice on Milk Hygiene By Source and District, 2002/03 Agricultural Year.....	247
29.5	Number of Agricultural Households Receiving Extension Advice on Disease Control By Source and District, 2002/03 Agricultural Year.....	247
29.6	Number of Agricultural Households Receiving Extension Advice on Herd /Flock Size and Selection By Source and District, 2002/03 Agricultural Year	248
29.7	Number of Agricultural Households Receiving Extension Advice Pasture Establishment and Selection By Source and District, 2002/03 Agricultural Year.....	248
29.8	Number of Agricultural Households Receiving Extension Advice on Group Formation and Strengthening By Source and District, 2002/03 Agricultural Year.....	248
29.9	Number of Agricultural Households Receiving Extension Advice on Calf Rearing By Source and District, 2002/03 Agricultural Year.....	248

29.10	Number of Agricultural Households Receiving Extension Advice on Use of Improved Bulls By Source and District, 2002/03 Agricultural Year	249
29.11	Number of Agricultural Households By Quality of Extension Services and District, 2002/03 Agricultural Year	249
29.12	Number of Agricultural Households By Source of Extension Services and District, 2002/03 Agricultural Year	249
29.13	Number of Agricultural Households with/ without Contact farmers/ Group Member and District, 2002/03 Agricultural Year	249
LABOUR USE.....		251
33.0:	Mean distances from holders dwellings to infrastructures and services by districts	252
33.1	Number of Agricultural Households by Distance to Primary School and District, 2002/03 Agricultural Year	252
33.2	Number of Agricultural Households by Distance to Secondary School and District, 2002/03 Agricultural Year	252
33.3	Number of Agricultural Households by Distance to Health Clinic School and District, 2002/03 Agricultural Year	252
33.4	Number of Agricultural Households by Distance to Hospital School and District, 2002/03 Agricultural Year	252
33.5	Number of Agricultural Households by Distance to District Capital and District, 2002/03 Agricultural Year	253
33.6	Number of Agricultural Households by Distance to Districtal Capital and District, 2002/03 Agricultural Year	253
33.7	Number of Agricultural Households by Distance to Feeder Road and District, 2002/03 Agricultural Year	253
33.8	Number of Agricultural Households by Distance to All Weather Road and District, 2002/03 Agricultural Year	253
33.9	Number of Agricultural Households by Distance to Tarmac Road and District, 2002/03 Agricultural Year	254
33.10	Number of Agricultural Households by Distance to Primary Market and District, 2002/03 Agricultural Year	254
33.11	Number of Agricultural Households by Distance to Secondary Market and District, 2002/03 Agricultural Year	254
33.12	Number of Agricultural Households by Distance to Tertiary Market and District, 2002/03 Agricultural Year	254
33.13	Number of Agricultural Households by Distance to Veterinary Clinic and District, 2002/03 Agricultural Year	255

33.14	Number of Agricultural Households by Distance to Extension Center	255
33.15	Number of Agricultural Households by Distance to Research Station and District, 2002/03 Agricultural Year	255
33.16	Number of Agricultural Households by Distance to Plant Protection Lab and District, 2002/03 Agricultural Year	255
33.17	Number of Agricultural Households by Distance to Land Registration Office and District, 2002/03 Agricultural Year	256
33.18	Number of Agricultural Households by Distance to Livestock Development Center	256
33.19	Number of Agricultural Households by Satisfaction of Using Veterinary Clinic and District, 2002/03 Agricultural Year	256
33.20	Number of Agricultural Households by Satisfaction of Using Extension Center and District, 2002/03 Agricultural Year	256
33.21	Number of Agricultural Households by Satisfaction of Using Research Station and District, 2002/03 Agricultural Year	257
33.22	Number of Agricultural Households by Satisfaction of Using Plant Protection Lab and District, 2002/03 Agricultural Year	257
33.23	Number of Agricultural Households by Satisfaction of Using Land Registration Office and District, 2002/03 Agricultural Year	257
33.24	Number of Agricultural Households by Satisfaction of Using Livestock Development Center	257
HOUSEHOLD FACILITIES.....		259
34.1:	Number of households reporting average number of rooms and type of Roofing Materials by District, 2002/03 Agricultural Year	260
34.2:	Number of Agricultural Households reporting ownership of Assets by District, 2002/03 Agricultural Year	260
34.3:	Number of Agricultural Households Reporting Main Source of Energy for Lighting by District, 2002/03 Agricultural Year	261
34.4:	Number of Agricultural Households Reporting Main Source of Energy for Cooking by District, 2002/03 Agricultural Year	261
34.5:	Number of Agricultural Households Reporting Main Source of Drinking Water during Wet Season by District, 2002/03 Agricultural Year	261
34.6:	Number of Agricultural Households Reporting Distance to Main Source of Drinking Water during Wet Season by District, 2002/03 Agricultural Year	262
34.7:	Number of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water during Wet Season by District, 2002/03 Agricultural Year	262

34.8:	Number of Agricultural Households Reporting Main Source of Drinking Water during Dry Season by District, 2002/03 Agricultural Year	262
34.9:	Number of Agricultural Households Reporting Distance to Main Source of Drinking Water during Dry Season by District, 2002/03 Agricultural Year	262
34-10:	Number of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water during Dry Season by District, 2002/03 Agricultural Year	263
34-11:	Number of Agricultural Households Reporting type of TOILET the household normally use by District, 2002/03 Agricultural Year	263
34-12:	Number of Agricultural Households Reporting Number of meals the household normally has per day by District, 2002/03 Agricultural Year.....	263
34-13:	Number of Agricultural Households Reporting Number of days the household Consumed Meat during the Preceeding Week by District, 2002/03 Agricultural Year.....	263
34-14:	Number of Agricultural Households Reporting Number of days the household Consumed Fish during the Preceeding Week by District, 2002/03 Agricultural Year	264
34-15:	Number of Agricultural Households Reporting the status of food satisfaction of the household during the Preceeding Year by District, 2002/03 Agricultural Year	264
34-16:	Number of Agricultural Households Reporting Main Source of Income by District, 2002/03 Agricultural Year	264

APPENDIX II: CROPS

Type of Agriculture Household	119
Number of Agriculture Households.....	121
Rank of Importance of Livelihood activities	123
Households Demographs	127
Land access/ownership	135
Land Use	137
Communal Resources	141
Total annual crop & vege production - long and short rainy season	149
Annual crop and vege production - short rainy season.....	155
Annual crop and vege production-long rainy season.....	159
Permanent Crops.....	173
Agroprocessing	179
Storage	183
Marketing	187
Irrigation	189
Access to Farm Inputs/ Implements.....	193
Agriculture Credit	205
Crop Extension.....	211
Animal Contribution to crop production.....	217
Cattle Production	221
Goats Production.....	227
Sheep Production	231
Pig Production.....	235
Livestock Pests and Parasite Control.....	237
Other livestock	241
Fish Farming.....	243
Livestock Extension.....	245
Labour Use.....	251
Household Facilities.....	259

TYPE OF AGRICULTURE HOUSEHOLD

2.1 TYPE OF AGRICULTURE HOUSEHOLD: Number of Agriculture households by type of household and District during 2002/03 Agriculture Year

Agriculture, Non Agriculture and Urban Households								
District	Rural households involved in Agriculture	% of Total rural households	Rural households NOT involved in Agriculture	% of Total rural households	Total rural households	% of Total rural households	Urban households	Total number of Household (from 2002 pop. Census)
	Number	%	Number	%	Number	%	Number	Number
Babati	46,635	93	3,778	7	50,413	84	9,557	59,970
Hanang	31,245	96	1,254	4	32,499	89	4,098	36,597
Kiteto	34,381	93	2,594	7	36,975	116	-4,993	31,982
Mbulu	16,364	95	941	5	17,305	45	21,424	38,729
Simanjiro	25,569	85	4,364	15	29,933	92	2,649	32,582
Total	154,194	92	12,931	8	167,125	84	32,735	199,860

2.2 TYPE OF AGRICULTURE HOUSEHOLD: Number of Agriculture Households By Type of Holding and District, 2002/03 Agricultural Year

District	Crops Only		Pastoralist		Livestock Only		Crops & Livestock		Total Number of agriculture Household	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number	%	Number	%	Number	%	Number	%			
Babati	16,609	35.6	0	0.0	330	0.7	29,697	63.7	46,635	46,305	30,026
Hanang	9,190	29.4	0	0.0	223	0.7	21,833	69.9	31,245	31,022	22,055
Kiteto	6,626	19.3	0	0.0	166	0.5	27,589	80.2	34,381	34,215	27,755
Mbulu	3,413	20.9	72	0.4	2,534	15.5	10,345	63.2	16,364	13,759	12,951
Simanjiro	18,086	70.7	69	0.3	524	2.0	6,891	26.9	25,569	24,976	7,484
Total	53,923	35.0	141	0.1	3,776	2.4	96,354	62.5	154,194	150,278	100,271

NUMBER OF AGRICULTURE HOUSEHOLDS

3.0: Number of Agricultural Households and Average Household Size By Sex of the Head of Household and District, 2002/03 Agricultural Year

District	Male			Female			Total		Average Household Size	% of female headed household
	Number of Households	%	Average Household Size	Number of Households	%	Average Household Size	Number of Households	%		
Babati	39,159	84	5	7,476	16	4	46,635	100	5	38
Hanang	28,310	91	6	2,935	9	5	31,245	100	6	15
Mbulu	31,922	93	7	2,459	7	6	34,381	100	6	12
Simanjiro	12,679	77	5	3,685	23	5	16,364	100	5	18
Kiteto	22,199	87	5	3,370	13	4	25,569	100	5	17
Total	134,268	87	6	19,926	13	5	154,194	100	6	100

RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES

Table 3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District

District	Livelihood Activity						
	Annual Crop	Permanent Crop Farming	Livestock Keeping /	Off Farm Income	Remittances	Fishing / Hunting &	Tree / Forest Resources
Babati	1	6	3	2	5	7	4
Hanang	1	6	2	3	5	7	4
Mbulu	1	5	2	4	6	7	3
Simanjiro	1	6	2	3	5	7	4
Kiteto	1	5	3	2	6	7	4
Total	1	6	2	3	5	7	4

3.1a RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: First Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	25,675	125	3,917	13,765	1,275	115	1,176
Hanang	29,221	77	379	1,492	75	0	223
Mbulu	31,002	257	1,364	1,585	0	0	261
Simanjiro	7,076	35	7,560	1,222	89	96	117
Kiteto	17,786	0	4,435	3,241	67	0	135
Total	110,759	495	17,654	21,305	1,505	211	1,912

3.1b RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Second Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	12,867	376	13,494	12,839	1,847	125	4,975
Hanang	1,816	467	19,935	4,280	710	0	2,115
Mbulu	2,714	1,128	21,598	5,969	1,023	0	1,532
Simanjiro	5,859	120	4,471	2,919	554	48	519
Kiteto	7,011	996	3,021	8,325	57	69	1,324
Total	30,268	3,086	62,519	34,330	4,192	242	10,465

3.1c RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Third Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	5,512	1,262	9,275	7,075	2,274	0	13,891
Hanang	142	317	2,306	5,215	473	66	4,877
Mbulu	329	1,818	4,179	7,269	475	172	15,908
Simanjiro	758	282	864	3,265	621	142	1,962
Kiteto	246	633	1,353	2,698	385	0	2,188
Total	6,987	4,312	17,977	25,522	4,227	379	38,826

3.1d RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Fourth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	1,358	714	3,905	2,116	1,507	365	10,259
Hanang	0	470	235	384	157	0	1,380
Mbulu	0	2,074	1,645	3,931	406	0	7,535
Simanjiro	88	100	49	534	102	53	531
Kiteto	0	265	197	137	69	0	576
Total	1,446	3,624	6,031	7,102	2,240	419	20,280

3.1e RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Fifth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	206	441	1,048	357	487	125	685
Hanang	0	0	76	78	0	0	0
Mbulu	0	952	86	344	258	84	1,731
Simanjiro	0	0	0	99	46	0	70
Kiteto	0	70	0	66	0	0	0
Total	206	1,462	1,210	944	791	210	2,486

3.1f RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Sixth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	0	0	0	0	0	0	0
Hanang	0	0	0	0	0	0	0
Mbulu	0	0	0	84	87	0	0
Simanjiro	94	0	12	0	0	0	0
Kiteto	0	0	0	0	0	0	0
Total	94	0	12	84	87	0	0

3.1g RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Seventh Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Babati	0	0	0	0	94	0	125
Hanang	0	0	0	0	0	0	0
Mbulu	0	87	87	0	0	0	0
Simanjiro	0	0	45	0	0	0	0
Kiteto	0	0	0	0	0	0	0
Total	0	87	132	0	94	0	125

HOUSEHOLDS DEMOGRAPHYS

**3.2 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members
By Sex and Age Group, 2002/03 Agricultural Year**

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	56,229	50	55,239	50	111,467	100
05 - 09	73,390	53	65,361	47	138,752	100
10 - 14	67,177	52	61,629	48	128,806	100
15 - 19	50,574	54	43,302	46	93,876	100
20 - 24	39,070	52	36,776	48	75,846	100
25 - 29	29,115	48	32,100	52	61,215	100
30 - 34	25,800	47	28,986	53	54,785	100
35 - 39	23,994	52	21,904	48	45,899	100
40 - 44	19,707	58	14,533	42	34,240	100
45 - 49	14,529	52	13,571	48	28,101	100
50 - 54	12,203	55	9,793	45	21,997	100
55 - 59	9,041	61	5,682	39	14,723	100
60 - 64	7,142	47	7,983	53	15,125	100
65 - 69	6,303	66	3,252	34	9,555	100
70 - 74	5,740	64	3,223	36	8,963	100
75 - 79	3,404	52	3,120	48	6,525	100
80 - 84	3,803	60	2,496	40	6,299	100
Above 85	3,113	64	1,762	36	4,875	100
Total	450,336	52	410,714	48	861,049	100

**3.3 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members
By Sex and Age Group, 2002/03 Agricultural Year**

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	56,229	12	55,239	13	111,467	13
05 - 09	73,390	16	65,361	16	138,752	16
10 - 14	67,177	15	61,629	15	128,806	15
15 - 19	50,574	11	43,302	11	93,876	11
20 - 24	39,070	9	36,776	9	75,846	9
25 - 29	29,115	6	32,100	8	61,215	7
30 - 34	25,800	6	28,986	7	54,785	6
35 - 39	23,994	5	21,904	5	45,899	5
40 - 44	19,707	4	14,533	4	34,240	4
45 - 49	14,529	3	13,571	3	28,101	3
50 - 54	12,203	3	9,793	2	21,997	3
55 - 59	9,041	2	5,682	1	14,723	2
60 - 64	7,142	2	7,983	2	15,125	2
65 - 69	6,303	1	3,252	1	9,555	1
70 - 74	5,740	1	3,223	1	8,963	1
75 - 79	3,404	1	3,120	1	6,525	1
80 - 84	3,803	1	2,496	1	6,299	1
Above 85	3,113	1	1,762	0	4,875	1
Total	450,336	100	410,714	100	861,049	100

3.4 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Sex and District, 2002/03 Agricultural Year

District	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Babati	119,756	52	108,485	48	228,241	100
Hanang	100,285	52	91,632	48	191,917	100
Mbulu	117,996	53	104,600	47	222,596	100
Simanjiro	44,450	52	41,069	48	85,519	100
Kiteto	67,849	51	64,927	49	132,776	100
Total	450,336	52	410,714	48	861,049	100

3.5 HOUSEHOLDS DEMOGRAPHYS: Number of Agriculture Household Members 5 years and above Who Can Read and Write Languages By Type of Language and District, 2002/03 Agricultural Year

District	Read & Write					
	Swahili		Swahili & English		Any Other Language	
	Number	%	Number	%	Number	%
Babati	133,130	65	15,810	8	0	0
Hanang	103,760	61	8,067	5	468	0
Mbulu	122,052	64	5,219	3	0	0
Simanjiro	34,639	48	1,567	2	12	0
Kiteto	56,637	51	1,972	2	0	0
Total	450,219	60	32,634	4	481	0

cont...HOUSEHOLDS DEMOGRAPHYS: Number of Agriculture Household Members 5 years and above Who Can Read and Write Languages By Type of Language and District, 2002/03 Agricultural Year

District	Read & Write			
	Don't Read / Write		Total	
	Number	%	Number	%
Babati	57,402	28	206,342	100
Hanang	58,508	34	170,803	100
Mbulu	62,784	33	190,055	100
Simanjiro	35,597	50	71,815	100
Kiteto	51,957	47	110,567	100
Total	266,249	36	749,582	100

3.6 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members 5 years and above By School Attendance and District , 2002/03 Agricultural Year

District	School Attendance							
	Attending School		Completed		Never Attended to School		Total	
	Number	%	Number	%	Number	%	Number	%
Babati	68,948	33	82,198	40	55,195	27	206,342	100
Hanang	59,189	35	56,134	33	55,480	32	170,803	100
Mbulu	63,815	34	68,842	36	57,398	30	190,055	100
Simanjiro	16,562	23	20,486	29	34,767	48	71,815	100
Kiteto	29,789	27	34,406	31	46,372	42	110,567	100
Total	238,303	32	262,067	35	249,212	33	749,582	100

3.7 HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year

District	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping /		Livestock Pastoralist		Fishing		Government /	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	102,488	50	6,527	3	359	0	0	0	1,533	1
Hanang	83,945	49	4,565	3	155	0	66	0	618	0
Mbulu	87,247	46	6,363	3	349	0	86	0	1,430	1
Simanjiro	21,870	30	24,498	34	864	1	102	0	436	1
Kiteto	58,979	53	9,264	8	1,033	1	0	0	655	1
Total	354,529	47	51,216	7	2,761	0	254	0	4,673	1

cont... HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year

District	Main Activity									
	Private - NGO / Mission		Self Employed (Non		Self Employed (Non		Unpaid Family Helper		Not Working &	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	1,711	1	3,161	2	94	0	916	0	115	0
Hanang	694	0	473	0	0	0	841	0	710	0
Mbulu	2,992	2	732	0	1,164	1	160	0	307	0
Simanjiro	610	1	212	0	576	1	645	1	178	0
Kiteto	275	0	137	0	671	1	666	1	386	0
Total	6,281	1	4,715	1	2,505	0	3,228	0	1,696	0

cont... HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members By Main Activity and District, 2002/03 Agricultural Year

District	Main Activity									
	Not Working &		Housemaker /		Student		Unable to Work / Too		Other	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	118	0	1,545	1	66,314	32	14,416	7	7,044	3
Hanang	312	0	2,967	2	54,295	32	20,226	12	936	1
Mbulu	516	0	3,168	2	60,202	32	24,415	13	926	0
Simanjiro	84	0	653	1	14,541	20	5,694	8	851	1
Kiteto	285	0	675	1	27,033	24	8,695	8	1,812	2
Total	1,315	0	9,008	1	222,386	30	73,446	10	11,569	2

cont... HOUSEHOLDS DEMOGRAPHICS: Number of Agricultural Household Members By Main Activity and District,

District	Total	
	Number	%
Babati	206,342	100
Hanang	170,803	100
Mbulu	190,055	100
Simanjiro	71,815	100
Kiteto	110,567	100
Total	749,582	100

3.8 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Level of involvement in Farming Activity and District, 2002/03 Agricultural Year

District	Involvement in Farming									
	Works Full-time on		Works Part-time on		Rarely Works on Farm		Never Works on Farm		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	89,799	44	6,019	3	50,375	24	60,149	29	206,342	100
Hanang	66,253	39	9,337	5	53,201	31	42,011	25	170,803	100
Mbulu	80,717	42	8,212	4	47,736	25	53,390	28	190,055	100
Simanjiro	19,620	27	7,345	10	28,410	40	16,440	23	71,815	100
Kiteto	61,516	56	5,036	5	19,038	17	24,977	23	110,567	100
Total	317,905	42	35,949	5	198,760	27	196,967	26	749,582	100

3.9 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Education Level									
	Under Standard One		Standard One		Standard Two		Standard Three		Standard Four	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	447.4	0.5	231.0	0.3	593.7	0.7	1986.7	2.4	5808.8	7.1
Hanang	222.3	0.4	292.5	0.5	1079.6	1.9	1545.1	2.8	4085.9	7.3
Mbulu	0.0	0.0	508.0	0.7	1093.3	1.6	1351.1	2.0	5865.4	8.5
Simanjiro	237.8	1.2	177.7	0.9	370.9	1.8	818.3	4.0	1429.7	7.0
Kiteto	68.3	0.2	52.0	0.2	515.0	1.5	1157.1	3.4	2472.9	7.2
Total	975.9	0.4	1261.3	0.5	3652.4	1.4	6858.4	2.6	19662.7	7.5

cont... HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Education Level									
	Standard Five		Standard Six		Standard Seven		Standard Eight		Training After Pri	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	920.1	1.1	1417.6	1.7	60116.3	73.1	688.7	0.8	6277.0	7.6
Hanang	779.2	1.4	850.0	1.5	44172.3	78.7	152.9	0.3	233.4	0.4
Mbulu	516.6	0.8	590.5	0.9	55039.4	80.0	332.5	0.5	343.7	0.5
Simanjiro	539.1	2.6	496.1	2.4	14728.0	71.9	215.0	1.0	129.4	0.6
Kiteto	507.4	1.5	436.0	1.3	26971.8	78.4	67.1	0.2	205.0	0.6
Total	3262.4	1.2	3790.1	1.4	201027.8	76.7	1456.2	0.6	7188.5	2.7

cont... HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Education Level									
	Pre Form One		Form One		Form Two		Form Four		Form Six	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	0.0	0.0	0.0	0.0	115.3	0.1	2088.6	2.5	0.0	0.0
Hanang	314.1	0.6	80.1	0.1	236.9	0.4	1006.4	1.8	0.0	0.0
Mbulu	0.0	0.0	255.1	0.4	0.0	0.0	1569.7	2.3	86.4	0.1
Simanjiro	38.2	0.2	0.0	0.0	321.7	1.6	413.1	2.0	0.0	0.0
Kiteto	0.0	0.0	0.0	0.0	332.4	1.0	822.2	2.4	0.0	0.0
Total	352.3	0.1	335.2	0.1	1006.4	0.4	5900.0	2.3	86.4	0.0

cont... HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Education Level							
	Training After Secondary		University & Other Tertiary		Adult Education		Total	
	Number	%	Number	%	Number	%	Number	%
Babati	1197.5	1.5	0.0	0.0	309.7	0.4	82198.3	100.0
Hanang	154.4	0.3	63.5	0.1	865.7	1.5	56134.3	100.0
Mbulu	433.2	0.6	84.4	0.1	772.9	1.1	68842.2	100.0
Simanjiro	188.4	0.9	0.0	0.0	382.4	1.9	20485.9	100.0
Kiteto	257.1	0.7	0.0	0.0	541.9	1.6	34406.3	100.0
Total	2230.7	0.9	147.9	0.1	2872.6	1.1	262067.1	100.0

3.10 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Households and Average Household Size By Sex of

District	Male			Female			Total		
	Number of Household Members	Number of Households	Average Household Size	Number of Household Members	Number of Households	Average Household Size	Number of Household Members	Number of Households	Average Household Size
Babati	196,217	39,159	5	32,024	7,476	4	228,241	46,635	5
Hanang	177,769	28,310	6	14,148	2,935	5	191,917	31,245	6
Mbulu	207,958	31,922	7	14,638	2,459	6	222,596	34,381	6
Simanjiro	68,112	12,679	5	17,407	3,685	5	85,519	16,364	5
Kiteto	119,278	22,199	5	13,498	3,370	4	132,776	25,569	5
Total	769,334	134,268	6	91,715	19,926	5	861,049	154,194	6

3.11 HOUSEHOLD DEMOGRAPHYS: Number of Agricultural Households Involved in Off Farm Income

District	Off farm income							
	One		Two		More than Two		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Babati	12,723	32	19,525	49	7,572	19	39,820	100
Hanang	8,926	78	2,073	18	468	4	11,467	100
Mbulu	11,123	59	5,441	29	2,228	12	18,793	100
Simanjiro	5,000	67	1,453	19	1,015	14	7,468	100
Kiteto	8,635	64	3,522	26	1,298	10	13,455	100
Total	46,407	51	32,014	35	12,581	14	91,002	100

3.12 HOUSEHOLDS DEMOGRAPHYS: Number of Heads of Agricultural Households By Maximum Education Level Attained and District, 2002/03 Agricultural Year

District	Maximum Education Level Attained							Total
	No Education	Primary Education	Post Primary Education	Secondary Education	Post Secondary Education	University & Equivalent Education	Adult Education	
Babati	16,933	26,687	1,172	933	601	0	310	46,635
Hanang	12,120	17,808	234	392	154	63	473	31,245
Mbulu	13,320	19,628	258	492	174	84	426	34,381
Simanjiro	8,979	6,554	79	360	148	0	243	16,364
Kiteto	10,806	13,633	275	447	69	0	340	25,569
Total	62,158	84,309	2,017	2,624	1,146	148	1,792	154,194

3.13 HOUSEHOLDS DEMOGRAPHYS: Mean, Meadian, Mode of Age of Head of Agricultural Household and District

District	Male			Female			Total		
	Mean	Median	Mode	Mean	Median	Mode	Mean	Median	Mode
Babati	45	42	35	51	49	40	46	43	40
Hanang	45	41	35	47	47	45	45	42	35
Mbulu	48	44	30	52	50	50	48	45	40
Simanjiro	44	42	45	40	38	38	43	40	30
Kiteto	41	38	30	44	40	30	42	38	30
Total	45	42	30	47	45	40	45	42	40

3.14 Literacy Rate of Heads of Households by Sex and District

District	Literacy								
	Know			Don't know			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Babati	27,302	3,066	30,369	11,856	4,410	16,266	39,159	7,476	46,635
Hanang	18,372	1,005	19,378	9,937	1,930	11,867	28,310	2,935	31,245
Mbulu	20,158	905	21,063	11,764	1,554	13,318	31,922	2,459	34,381
Simanjiro	6,582	1,051	7,632	6,097	2,634	8,732	12,679	3,685	16,364
Kiteto	13,855	1,288	15,143	8,344	2,082	10,426	22,199	3,370	25,569
Total	86,270	7,316	93,586	47,999	12,610	60,609	134,268	19,926	154,194

3.15 Number of Heads of Agricultural Households reporting Literacy levels by Sex of head and District, 2002/03

District	Male			Female			Total		
	Know			Don't Know			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Babati	27,302	3,066	30,369	11,856	4,410	16,266	39,159	7,476	46,635
Hanang	18,372	1,005	19,378	9,937	1,930	11,867	28,310	2,935	31,245
Mbulu	20,158	905	21,063	11,764	1,554	13,318	31,922	2,459	34,381
Simanjiro	6,582	1,051	7,632	6,097	2,634	8,732	12,679	3,685	16,364
Kiteto	13,855	1,288	15,143	8,344	2,082	10,426	22,199	3,370	25,569
Total	86,270	7,316	93,586	47,999	12,610	60,609	134,268	19,926	154,194

LAND ACCESS/OWNERSHIP

4.1 LAND ACCESS/OWNERSHIP: Number of Agricultural Households By Type of Land Ownership/Tenure and District, 2002/03 Agricultural Year

District	Land Access														Total number of Households
	Leased/Certificate of Ownership		Area Owned Under Customary Law		Bought		Rented		Borrowed		Households with Area Shared Cropped		Households with Area under Other Forms of Tenure		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Babati	10,863	23	33,252	71	9,120	20	4,671	10	1,986	4	361	1	3,478	7	46,635
Hanang	8,674	28	17,373	56	5,051	16	4,062	13	1,438	5	391	1	3,601	12	31,245
Mbulu	1,594	5	30,750	89	1,955	6	1,217	4	1,685	5	173	1	1,193	3	34,381
Simanjiro	1,952	12	11,434	70	1,020	6	613	4	529	3	72	0	242	1	16,364
Kiteto	773	3	17,513	68	2,634	10	5,197	20	441	2	67	0	1,488	6	25,569
Total	23,856	15	110,322	72	19,780	13	15,760	10	6,079	4	1,064	1	10,001	6	154,194

4.2 LAND ACCESS/OWNERSHIP: Area of Land by type of Ownership/Tenure (Hectare) and District, 2002/03 Agricultural Year

District	Land Access/ Ownership (Hectare)							
	Area Leased/Certificate of Ownership	Area Owned Under Customary Law	Area Bought From Others	Area Rented From Others	Area Borrowed From Others	Area Shared Cropped From Others	Area under Other Forms of Tenure	Total
Babati	14,781	50,017	11,823	5,039	1,747	550	2,681	86,639
Hanang	17,811	34,770	11,864	3,851	1,497	487	9,784	80,064
Mbulu	2,746	51,436	4,693	903	804	70	1,726	62,379
Simanjiro	4,856	50,612	2,191	543	549	22	268	59,041
Kiteto	4,735	67,427	9,345	11,137	1,204	273	5,343	99,463
Total	44,929	254,262	39,915	21,473	5,801	1,402	19,802	387,585

LAND USE

5.1 LAND USE: Area of Land by type of Land Use and District during 2002/03 Agricultural Year

District	Size of Holding (Ha)													Total
	Land Use													
	Area under Temporary Mono Crops	Area under Temporary Mixed Crops	Area under Permanent Mono Crops	Area under Permanent Mixed Crops	Area under Permanent / Annual Mix	Area under Pasture	Area under Fallow	Area under Natural Bush	Area under Planted Trees	Area Rented to Others	Area Unusable	Area of Uncultivated Usable Land		
Babati	18,752	52,014	168	361	594	1,913	3,944	1,097	985	1,787	1,769	3,255	86,639	
Hanang	19,488	43,730	17	282	574	9,252	2,468	161	212	191	1,101	2,558	80,034	
Mbulu	3,651	36,206	156	376	2,151	15,584	638	550	750	483	1,022	812	62,379	
Simanjiro	20,950	12,697	7	279	274	3,364	2,032	1,649	606	990	2,291	13,767	58,906	
Kiteto	56,662	21,668	39	301	1,043	434	4,837	305	424	4,024	1,302	8,423	99,463	
Total	119,503	166,314	387	1,599	4,636	30,547	13,919	3,762	2,977	7,475	7,485	28,815	387,420	

5.2 LAND USE: Number of Agricultural Households By Type of Land Use and District, 2002/03 Agricultural Year

District	Land Use													Total
	Households with Area under Temporary Mono Crops	Households with Area under Temporary Mixed Crops	Households with Area under Permanent Mono Crops	Households with Area under Permanent Mixed Crops	Households with Area under Permanent / Annual Mix	Households with Area under Pasture	Households with Area under Fallow	Households with Area under Natural Bush	Households with Area under Planted Trees	Households with Area Rented to Others	Households with Area Unusable	Households with Area of Uncultivated Usable Land		
Babati	16,195	34,279	454	540	1,286	2,738	2,826	476	3,966	1,635	2,036	2,665	69,095	
Hanang	10,962	24,510	155	311	395	3,307	1,245	159	763	238	778	2,416	45,240	
Mbulu	6,432	32,048	957	779	2,854	11,747	1,264	949	2,763	676	1,201	1,617	63,286	
Simanjiro	9,986	4,984	35	237	280	1,121	443	224	478	321	748	5,222	24,079	
Kiteto	19,048	7,334	171	137	391	134	1,796	160	262	864	329	3,127	33,752	
Total	62,624	103,155	1,772	2,004	5,205	19,047	7,574	1,967	8,232	3,733	5,092	15,047	235,452	
%	27	44	1	1	2	8	3	1	3	2	2	6	100	

5.3 LAND SUFFICIENCY: Number of Agricultural Households by Whether All Land Available to the Household Was Used and District, 2002/03 Agricultural Year

District	Was all Land Available to the Hh Used During 2002/03?					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Babati	37,049	80	9,256	20	46,305	100
Hanang	24,494	79	6,529	21	31,022	100
Mbulu	27,773	81	6,443	19	34,215	100
Simanjiro	6,664	48	7,095	52	13,759	100
Kiteto	18,425	74	6,551	26	24,976	100
Total	114,404	76	35,873	24	150,278	100

5.4 LAND SUFFICIENCY: Number of Agricultural Households by Whether they Consider Having Sufficient Land for the Household and District, 2002/03 Agricultural Year

District	Do you Consider that you have sufficient land for the Hh?					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Babati	20,925	45	25,380	55	46,305	100
Hanang	13,015	42	18,007	58	31,022	100
Mbulu	15,899	46	18,316	54	34,215	100
Simanjiro	4,182	30	9,577	70	13,759	100
Kiteto	8,857	35	16,119	65	24,976	100
Total	62,879	42	87,399	58	150,278	100

5.5 LAND SUFFICIENCY: Number of Agricultural Households by whether Female Members of the Household Own or Have Customary Right to Land and District, 2002/03 Agricultural Year

District	Do any Female Members of the Hh own or have customary right					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Babati	5,188	11	41,117	89	46,305	100
Hanang	3,033	10	27,989	90	31,022	100
Mbulu	2,420	7	31,795	93	34,215	100
Simanjiro	1,852	13	11,907	87	13,759	100
Kiteto	5,948	24	19,028	76	24,976	100
Total	18,442	12	131,836	88	150,278	100

COMMUNIAL RESOURCES

6.1 COMMUNAL RESOURCES: Average Distance (Km) from Agriculture Household to Communal Resources by Name of Communal Resource, Season and District, 2002/03 Agricultural Year

District	Communal Resource							
	Water for Humans		Water for Livestock		Communal Grazing		Communal Firewood	
	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season
Babati	1.1	1.5	1.2	1.7	2.5	3.2	2.0	2.2
Hanang	2.0	4.2	2.3	4.4	2.2	3.4	1.9	2.1
Mbulu	1.2	1.7	1.4	1.9	2.3	3.0	1.8	1.6
Simanjiro	2.5	4.0	2.7	4.6	2.9	5.8	2.0	2.0
Kiteto	1.7	4.9	2.3	5.9	2.9	3.8	3.3	3.3
Total	1.6	2.9	1.8	3.3	2.5	3.6	2.2	2.2

cont... COMMUNAL RESOURCES: Average Distance (Km) from Agriculture Household to Communal Resources by Name of Communal Resource, Season and District, 2002/03 Agricultural Year

District	Communal Resource									
	Wood for Charcoal		Building Poles		Forest for Bees (Honey)		Hunting (Animal Products)		Fishing (Fish)	
	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season	Distance to resource (km), Wet Season	Distance to resource (km), Dry Season
Babati	2.5	2.5	2.0	2.2	4.1	4.1	7.8	7.8	7.3	8.2
Hanang	2.9	2.9	3.5	3.7	4.3	4.3	8.0	8.0	7.6	8.6
Mbulu	2.7	2.7	2.4	2.5	5.0	5.0	8.0	8.0	8.0	9.0
Simanjiro	2.4	2.4	3.1	3.3	4.3	4.3	7.7	7.6	6.9	7.7
Kiteto	3.8	3.6	3.5	3.7	4.1	4.1	7.2	7.2	8.3	9.3
Total	2.8	2.8	2.8	2.9	4.3	4.3	7.8	7.8	7.6	8.6

6.2 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Water for Humans by type of Utilization and District, 2002/03 Agricultural Year

District	Water for Humans					
	Home of Farm Consumption / Utilization	Sold to Village Market	Sold to Local Wholesale Market	Not Used by Household	Not Available	Total
Babati	46,411	0	0	114	110	46,635
Hanang	31,094	0	0	151	0	31,245
Mbulu	34,294	0	87	0	0	34,381
Simanjiro	16,255	41	41	27	0	16,364
Kiteto	25,444	0	0	125	0	25,569
Total	153,498	41	128	417	110	154,194

6.3 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Water for Livestock by type of Utilization and District, 2002/03 Agricultural Year

District	Water for Livestock					
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Village Market	Not Used by Household	Not Available	Total
Babati	35,338	112	117	9,560	1,508	46,635
Hanang	26,574	0	0	4,671	0	31,245
Mbulu	29,959	0	0	3,908	514	34,381
Simanjiro	13,445	0	38	1,710	1,171	16,364
Kiteto	11,659	206	0	13,287	417	25,569
Total	116,974	318	155	33,137	3,610	154,194

6.4 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Communal Grazing by type of Utilization and District, 2002/03 Agricultural Year

District	Communal Grazing								Total
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Not Used by Household	Not Available		
Babati	16,508	0	0	0	0	7,628	22,499		46,635
Hanang	7,888	237	66	78	0	4,453	18,523		31,245
Mbulu	7,322	174	0	0	0	2,055	24,831		34,381
Simanjiro	9,883	0	0	0	45	2,350	4,087		16,364
Kiteto	6,752	60	0	0	70	13,557	5,131		25,569
Total	48,352	471	66	78	114	30,042	75,071		154,194

6.5 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Communal Firewood by type of Utilization and District, 2002/03 Agricultural Year

District	Communal Firewood								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Babati	39,226	341	243	112	1,410	0	1,362	3,941	46,635
Hanang	30,092	315	0	0	0	78	454	305	31,245
Mbulu	30,996	173	0	86	174	86	73	2,792	34,381
Simanjiro	15,242	49	0	0	0	509	276	288	16,364
Kiteto	24,103	0	60	0	0	0	1,406	0	25,569
Total	139,660	878	303	198	1,584	674	3,571	7,326	154,194

6.6 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Wood for Charcoal by type of Utilization and District, 2002/03 Agricultural Year

District	Wood for Charcoal								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Babati	2,980	3,381	792	0	222	0	10,520	28,740	46,635
Hanang	3,114	671	404	66	232	0	8,993	17,766	31,245
Mbulu	948	166	604	87	0	603	8,326	23,647	34,381
Simanjiro	466	85	27	0	38	0	2,749	12,999	16,364
Kiteto	3,796	789	60	60	0	0	16,662	4,202	25,569
Total	11,304	5,092	1,888	212	492	603	47,250	87,353	154,194

6.7 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Building Poles by type of Utilization and District, 2002/03 Agricultural Year

District	Building Poles								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Babati	29,469	237	243	232	1,044	112	6,282	9,015	46,635
Hanang	24,234	156	78	0	0	0	5,303	1,473	31,245
Mbulu	18,770	690	87	0	2,250	174	6,945	5,464	34,381
Simanjiro	13,410	0	48	36	0	0	1,858	1,013	16,364
Kiteto	15,423	60	0	0	0	0	9,662	424	25,569
Total	101,306	1,144	457	268	3,294	286	30,050	17,389	154,194

6.8 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Forest For Bees Products by type of Utilization and District, 2002/03 Agricultural Year

District	Forest for Bees Products						
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Local Wholesale Market	Not Used by Household	Not Available	Total
Babati	3,439	337	104	0	14,278	28,476	46,635
Hanang	374	77	146	66	7,894	22,689	31,245
Mbulu	345	0	0	0	86	33,950	34,381
Simanjiro	184	0	0	0	1,700	14,481	16,364
Kiteto	1,141	166	0	0	14,000	10,262	25,569
Total	5,482	580	250	66	37,957	109,859	154,194

6.9 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Hunting Grounds by type of Utilization and District, 2002/03 Agricultural Year

District	Hunting Grounds							
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Babati	113	0	0	0	913	908	44,701	46,635
Hanang	63	0	310	0	0	889	29,982	31,245
Mbulu	0	174	0	87	0	86	34,034	34,381
Simanjiro	130	0	0	0	0	1,093	15,141	16,364
Kiteto	391	60	0	0	0	7,576	17,542	25,569
Total	697	234	310	87	913	10,553	141,400	154,194

6.10 COMMUNAL RESOURCES: Number of Agricultural Households with Access to Fishing Resources by type of Utilization and District, 2002/03 Agricultural Year

District	Fishing Resources								
	Home of Farm Consumption / Utilization	Sold to Neighbours	Sold to Traders on the Farm	Sold to Village Market	Sold to Local Wholesale Market	Sold to Major Wholesale Market	Not Used by Household	Not Available	Total
Babati	349	0	0	0	115	799	5,586	39,786	46,635
Hanang	0	0	0	0	153	0	2,024	29,067	31,245
Mbulu	0	87	0	0	87	0	86	34,121	34,381
Simanjiro	162	66	18	0	0	0	2,436	13,683	16,364
Kiteto	68	813	0	68	0	0	128	24,493	25,569
Total	578	966	18	68	356	799	10,261	141,149	154,194

**TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION -
LONG AND SHORT RAINY SEASON**

7.1 & 7.2a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Households and Planted Area By District-SHORT RAINY SEASON

District	Shorty Rainy Season		Long Rainy Season		Total area planted (hectares)	% Area planted in short rainy season
	Number of Households	Planted Area	Number of Households	Planted Area		
Babati	3,021	1,261	79,914	56,835	58,096	2.17
Hanang	314	191	65,711	58,469	58,659	0.33
Mbulu	7,700	2,242	78,905	39,557	41,798	5.36
Simanjiro	379	327	20,661	31,868	32,195	1.02
Kiteto	0	0	32,618	74,511	74,511	0.00
Total	11,414	4,020	277,809	261,239	265,260	1.52

average 0.4 1.5 0.9 98.5

7.1 and 7.2b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households Planting Crops By Season and District-SHORT RAINY SEASON

District	Short Rainy Season		Long Rainy Season		Total Number of Crop Growing Households
	Households Growing Crops	Households NOT Growing Crops	Number of Households Growing Crops	Number of Households NOT Growing Crops	
Babati	1,854	44,781	46,184	451	46,635
Hanang	79	31,166	30,944	301	31,245
Mbulu	3,633	30,748	33,519	862	34,381
Simanjiro	331	16,033	13,741	2,623	16,364
Kiteto	0	25,569	24,976	593	25,569
Total	5,897	148,297	149,363	4,831	154,194

Table 7.1 and 7.2c TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agriculture Year, Manyara Region

Crop	Short Rainy Season			Long Rainy Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
Cereal	2,712	3,184	1174	200,201	161,605	807	202,913	164,788	812
Maize	2,339	2,828	1209	185,559	144,945	781	187,898	147,773	786
Paddy	0	0	0	2,031	6,674	3287	2,031	6,674	3287
Sorghum	276	330	1197	6,495	3,747	577	6,771	4,078	602
Bulrush Millet	0	0	0	393	99	253	393	99	253
Finger Millet	97	25	260	3,679	2,618	712	3,775	2,643	700
Wheat	0	0	0	2,046	3,521	1721	2,046	3,521	1721
Roots and Tubers	73	59	812	1,344	1,282	954	1,417	1,341	946
Cassava	18	16	889	763	593	777	781	609	780
Sweet Potatoes	55	43	787	488	566	1160	543	609	1122
Irish Potatoes	0	0	0	78	122	1568	78	122	1568
Yams	0	0	0	15	1	49	15	1	49
Pulses	1,003	632	630	46,097	16,199	351	47,099	16,831	357
Beans	997	632	634	44,854	15,745	351	45,851	16,377	357
Cowpeas	6	0	0	450	82	183	455	82	181
Green Gram	0	0	0	11	5	494	11	5	494
Chich Peas	0	0	0	530	286	540	530	286	540
Bambaranuts	0	0	0	225	58	256	225	58	256
Field Peas	0	0	0	27	23	0	27	23	0
Oil Seeds and Oil nuts	133	56	423	13,097	6,974	532	13,231	7,031	531
Sunflower	32	19	593	11,251	6,347	564	11,283	6,366	564
Simsim	0	0	0	361	103	286	361	103	286
Groundnuts	102	38	371	1,486	524	353	1,588	562	354
Fruit and Vegetables	100	135	1358	470	1,892	4028	569	2,027	3561
Okra	0	0	0	7	34	4693	7	34	4693
Onions	28	53	1853	326	999	3062	355	1,052	2965
Cabbage	0	0	0	7	0	0	7	0	0
Tomatoes	24	49	2075	118	841	7133	142	890	6285
Spinnach	12	5	395	0	0	0	12	5	395
Chillies	0	0	0	118	841	7133	118	841	7133
Pumpkins	12	4	296	0	0	0	12	4	296
Cucumber	12	2	148	4	0	0	16	2	113
Water Mellon	12	23	1976	4	18	0	16	41	0
Cash Crops	0	0	0	30	25	823	30	25	823
Tobacco	0	0	0	30	25	823	30	25	823
Total	4,020			261,239			265,260		

* The total area planted includes the sum of the planted area for both Long and Short Season and is an overestimation of the actual area due to being produced on the same land during the 2 seasons. Previous surveys have used the lpro season to estimate physical land area under production to different crops

Table 7.1 and 7.2d TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agriculture Year, Manyara Region

Crop	Short Rainy Season		Long Rainy Season		Total Area Planted Short and Long Rainy Season	% Area Planted in Short Rainy Season
	Number of Households	Area Planted (ha)	Number of Households	Area Planted (ha)		
Cereals	6,091	2,712	172,447	200,201	202,913	1
Maize	4,883	2,339	144,475	185,559	187,898	1.2
Paddy	0	0	3,289	2,031	2,031	0.0
Sorghum	774	276	15,108	6,495	6,771	4.1
Bulrush Millet	0	0	491	393	393	0.0
Finger Millet	433	97	6,420	3,679	3,775	2.6
Wheat	0	0	2,664	2,046	2,046	0.0
Barley	0	0	0	0	0	0.0
Root and Tubers	434	73	5,423	1,344	1,417	5.1
Cassava	87	18	2,234	763	781	2.3
Sweet Potatoes	347	55	2,399	488	543	10.2
Irish Potatoes	0	0	714	78	78	0.0
Yams	0	0	75	15	15	0.0
Cocoyam	0	0	0	0	0	0.0
Pulses	3,947	1,003	82,843	46,097	47,099	2.1
Mung Beans	0	0	0	0	0	0.0
Beans	3,917	997	80,222	44,854	45,851	2.2
Cowpeas	30	6	941	450	455	1.3
Green Gram	0	0	36	11	11	0.0
Chich Peas	0	0	1,008	530	530	0.0
Bambaranuts	0	0	488	225	225	0.0
Field Peas	0	0	148	27	27	0.0
Oil Seeds and Oil nuts	204	133	15,789	13,097	13,231	1.0
Sunflower	79	32	12,004	11,251	11,283	0.3
Simsim	0	0	463	361	361	0.0
Groundnuts	125	102	3,322	1,486	1,588	6.4
Fruit and Vegetables	739	100	1,182	470	569	17.5
Okra	0	0	36	7	7	0.0
Bitter Aubergine	0	0	0	0	0	0.0
Onions	35	28	598	326	355	8.0
Cabbage	0	0	36	7	7	0.0
Tomatoes	235	24	404	118	142	16.8
Spinnach	117	12	0	0	12	100.0
Carrot	0	0	0	0	0	0.0
Chillies	0	0	36	118	118	0.0
Amaranths	0	0	0	0	0	0.0
Pumpkins	117	12	0	0	12	100.0
Cucumber	117	12	36	4	16	76.6
Egg Plant	0	0	0	0	0	0.0
Water Mellon	117	12	36	4	16	0.0
Cauliflower	0	0	0	0	0	0.0
Cash Crops	0	0		125	30	0.0
Cotton	0	0		0	0	0.0
Tobacco	0	0	125	30	30	0.0
Pyrethrum	0	0		0	0	0.0
Total				261,334	265,260	

7.1 & 7.2e ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-SHORT RAINY SEASON

District	Soil Preparation							
	Mostly Tractor		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Babati	5,700	9,807	36,615	44,123	5,722	4,166	48,038	58,096
Hanang	454	1,586	25,421	51,012	5,148	6,061	31,022	58,659
Mbulu	766	1,055	22,385	28,629	14,002	12,114	37,153	41,798
Simanjiro	7,319	20,696	3,008	7,426	3,744	4,073	14,072	32,195
Kiteto	5,833	26,180	1,250	3,102	17,893	45,229	24,976	74,511
Total	20,073	59,324	88,679	134,293	46,508	71,643	155,261	265,260

7.1 and 7.2f Total Annual Crop and Vegetable Production: Total Number of Agriculture Households and Planted Area by Fertilizer Use and District for the 2002/03 agriculture Year - Long and Short Rainy Season, Manyara Region

District	Fertilizer Use								
	Mostly Farm Yard		Mostly Compost		Mostly Inorganic		No Fertilizer Applied		Total
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Planted Area
Babati	18,338	23,489	243	296	0	0	29,456	34,311	58,096
Hanang	6,218	13,764	1,079	2,327	384	600	23,341	41,968	58,659
Mbulu	24,324	27,211	261	237	0	0	12,568	14,350	41,798
Simanjiro	1,925	4,880	167	356	501	479	11,479	26,481	32,195
Kiteto	959	5,204	245	551	68	110	23,704	68,647	74,511
Total	51,765	74,548	1,996	3,766	952	1,188	100,547	185,757	265,260

7.1 and 7.2g ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year SHORT RAINY SEASON

District	Irrigation Use						% of area planted under irrigation
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	3,061	3,942	44,977	54,154	48,038	58,096	6.8
Hanang	619	709	30,403	57,950	31,022	58,659	1.2
Mbulu	1,674	1,401	35,479	40,397	37,153	41,798	3.4
Simanjiro	1,350	1,356	12,723	30,839	14,072	32,195	4.2
Kiteto	177	662	24,799	73,849	24,976	74,511	0.9
Total	6,880	8,071	148,381	257,189	155,261	265,260	3.0

Number of households is an over estimate due to the double counting of households growing crops in both long and short rain seasons. To compare previous surveys use Number of Long Season

7.1 & 7.2h ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Pesticide Use and District During 2002/03 Crop Year in SHORT RAINY SEASON

District	Pesticide Use						% of area planted under pesticide
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	5,185	6,921	42,853	51,175	48,038	58,096	11.9
Hanang	2,883	7,042	28,139	51,617	31,022	58,659	12.0
Mbulu	2,301	2,496	34,851	39,302	37,153	41,798	6.0
Simanjiro	1,354	2,144	12,718	30,051	14,072	32,195	6.7
Kiteto	1,111	6,256	23,866	68,255	24,976	74,511	8.4
Total	12,833	24,859	142,427	240,401	155,261	265,260	9.4

Number of households is an over estimate due to the double counting of households growing crops in both long and short rain seasons. To compare previous surveys use Number of Long Season planters only.

7.1 & 7.2i ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Herbicide Use and District During 2002/03 Crop Year SHORT RAINY SEASON

District	Herbicide Use						% of area planted under Herbicide
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	1,057	2,135	46,981	55,960	48,038	58,096	3.7
Hanang	1,219	3,374	29,803	55,286	31,022	58,659	5.8
Mbulu	347	262	36,805	41,536	37,153	41,798	0.6
Simanjiro	342	628	13,731	31,567	14,072	32,195	2.0
Kiteto	405	1,694	24,571	72,817	24,976	74,511	2.3
Total	3,370	8,093	151,891	257,167	155,261	265,260	3.1

7.1 & 7.2j ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year SHORT RAINY SEASON

District	Fungicide Use						% of area planted under Fungicide
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	1,159	2,022	46,879	56,073	48,038	58,096	3.5
Hanang	1,407	3,938	29,615	54,721	31,022	58,659	6.7
Mbulu	605	479	36,547	41,319	37,153	41,798	1.1
Simanjiro	479	610	13,593	31,585	14,072	32,195	1.9
Kiteto	136	1,147	24,840	73,364	24,976	74,511	1.5
Total	3,786	8,197	151,475	257,063	155,261	265,260	3.1

7.1 & 7.2k ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - SHORT RAINY SEASON

District	Improved Seed Use						% of area planted under Improved Seeds
	Households Using Improved Seed		Households Not Using Improved Seed		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	7,564	10,895	40,474	47,201	48,038	58,096	18.8
Hanang	3,028	8,810	27,994	49,850	31,022	58,659	15.0
Mbulu	7,019	7,398	30,134	34,400	37,153	41,798	17.7
Simanjiro	4,318	8,101	9,754	24,094	14,072	32,195	25.2
Kiteto	3,232	12,075	21,745	62,437	24,976	74,511	16.2
Total	25,160	47,278	130,100	217,982	155,261	265,260	17.8

**ANNUAL CROP AND VEGETABLE PRODUCTION -
SHORT RAINY SEASON**

7.1a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-SHORT RAINY SEASON

District	Soil Preparation							
	Mostly Tractor Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Babati	475	409	1,052	695	327	158	1,854	1,261
Hanang	0	0	79	191	0	0	79	191
Mbulu	433	131	171	69	3,030	2,041	3,633	2,242
Simanjiro	81	124	71	86	179	118	331	327
Total	989	663	1,373	1,040	3,536	2,317	5,897	4,020
%	17	17	23	26	60	58	100	100

7.1b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fertilizer Use and District During 2002/03 Crop Year-SHORT RAINY SEASON

District	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic		No Fertilizer Applied		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Babati	695	454	0	0	0	0	1,158	807	1,854	1,261
Hanang	0	0	0	0	0	0	79	191	79	191
Mbulu	2,682	1,865	87	61	0	0	864	315	3,633	2,242
Simanjiro	0	0	0	0	0	0	331	327	331	327
Total	3,378	2,319	87	61	0	0	2,433	1,640	5,897	4,020
%	57	58	1	2	0	0	41	41	100	100

7.1c ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year SHORT RAINY SEASON

District	Irrigation Use						% of area planted under irrigation in short rainy season
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	704	404	1,150	857	1,854	1,261	32
Hanang	0	0	79	191	79	191	0
Mbulu	433	248	3,201	1,994	3,633	2,242	11
Simanjiro	70	114	261	214	331	327	35
Total	1,206	765	4,691	3,255	5,897	4,020	19
%	20	19	80	81	100	100	

7.1d ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Pesticide Use and District During 2002/03 Crop Year in SHORT RAINY SEASON

District	Pesticide Use					
	Households Using		Households Not Using		Total	
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Babati	467	293	1,387	968	1,854	1,261
Hanang	0	0	79	191	79	191
Mbulu	259	140	3,375	2,101	3,633	2,242
Simanjiro	80	162	251	166	331	327
Total	806	594	5,091	3,426	5,897	4,020

7.1e ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Herbicide Use and District During 2002/03 Crop Year SHORT RAINY SEASON

District	Herbicide Use						% of area planted under Herbicide
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	117	119	1,737	1,142	1,854	1,261	9
Hanang	0	0	79	191	79	191	0
Mbulu	174	106	3,459	2,136	3,633	2,242	5
Simanjiro	0	0	331	327	331	327	0
Total	292	225	5,605	3,796	5,897	4,020	6
%	5	6	95	94	100	100	

7.1f ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year SHORT RAINY SEASON

District	Fungicide Use						% of area planted under Fungicide
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	235	166	1,619	1,095	1,854	1,261	13
Hanang	0	0	79	191	79	191	0
Mbulu	87	35	3,546	2,206	3,633	2,242	2
Simanjiro	0	0	331	327	331	327	0
Total	322	201	5,575	3,819	5,897	4,020	5
%	5	5	95	95	100	100	

7.1g ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - SHORT RAINY SEASON

District	Improved Seed Use						% of area planted under Improved Seeds
	Households Using		Households Not Using		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	467	295	1,387	966	1,854	1,261	23
Hanang	79	191	0	0	79	191	100
Mbulu	862	707	2,771	1,534	3,633	2,242	32
Simanjiro	186	102	145	225	331	327	31
Total	1,594	1,295	4,303	2,725	5,897	4,020	32
%	27	32	73	68	100	100	

**ANNUAL CROP AND VEGETABLE PRODUCTION-
LONG RAINY SEASON**

7.2a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-LONG RAINY SEASON

District	Soil Preparation							
	Mostly Tractor		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Babati	5,225	9,398	35,564	43,428	5,395	4,008	46,184	56,835
Hanang	454	1,586	25,342	50,822	5,148	6,061	30,944	58,469
Mbulu	334	924	22,214	28,560	10,972	10,073	33,519	39,557
Simanjiro	7,238	20,572	2,937	7,340	3,566	3,955	13,741	31,868
Kiteto	5,833	26,180	1,250	3,102	17,893	45,229	24,976	74,511
Total	19,084	58,660	87,306	133,253	42,973	69,326	149,363	261,239

7.2b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fertilizer Use and District During 2002/03 Crop Year-LONG RAINY SEASON

District	Fertilizer Use									
	Mostly Farm Yard		Mostly Compost		Mostly Inorganic		No Fertilizer Applied		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Babati	17,643	23,035	243	296	0	0	28,297	33,504	46,184	56,835
Hanang	6,218	13,764	1,079	2,327	384	600	23,262	41,777	30,944	58,469
Mbulu	21,642	25,346	174	176	0	0	11,703	14,035	33,519	39,557
Simanjiro	1,925	4,880	167	356	501	479	11,148	26,154	13,741	31,868
Kiteto	959	5,204	245	551	68	110	23,704	68,647	24,976	74,511
Total	48,387	72,229	1,909	3,705	952	1,188	98,114	184,117	149,363	261,239

7.2c ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year LONG RAINY SEASON

District	Irrigation Use						% of area planted under Irrigation
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	2,357	3,538	43,826	53,297	46,184	56,835	6.2
Hanang	619	709	30,325	57,759	30,944	58,469	1.2
Mbulu	1,241	1,154	32,278	38,403	33,519	39,557	2.9
Simanjiro	1,279	1,242	12,462	30,625	13,741	31,868	3.9
Kiteto	177	662	24,799	73,849	24,976	74,511	0.9
Total	5,674	7,306	143,690	253,934	149,363	261,239	2.8

7.2d ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Pesticide Use and District During 2002/03 Crop Year in LONG RAINY SEASON

District	Pesticide Use					
	Households Using Pesticide		Households Not Using Pesticide		Total	
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Babati	4,718	6,629	41,466	50,206	46,184	56,835
Hanang	2,883	7,042	28,061	51,426	30,944	58,469
Mbulu	2,043	2,356	31,477	37,201	33,519	39,557
Simanjiro	1,274	1,982	12,467	29,886	13,741	31,868
Kiteto	1,111	6,256	23,866	68,255	24,976	74,511
Total	12,028	24,265	137,336	236,974	149,363	261,239

7.2e ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Herbicide Use and District During 2002/03 Crop Year LONG RAINY SEASON

District	Herbicide Use					
	Households Using Herbicide		Households Not Using Herbicide		Total	
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area
Babati	940	2,017	45,244	54,818	46,184	56,835
Hanang	1,219	3,374	29,724	55,095	30,944	58,469
Mbulu	173	156	33,346	39,401	33,519	39,557
Simanjiro	342	628	13,399	31,240	13,741	31,868
Kiteto	405	1,694	24,571	72,817	24,976	74,511
Total	3,078	7,868	146,285	253,371	149,363	261,239

7.2f: Number of Crop Producing Households Reporting Selling Agricultural Products During 2003/04 By District

District	Households that Sold Produce		Households that Did not Sell Produce		Total Number of Households
	Number	%	Number	%	
Babati	37,585	80.6	9,050	19.4	46,635
Hanang	16,241	52.0	15,004	48.0	31,245
Mbulu	16,476	47.9	17,906	52.1	34,381
Simanjiro	3,843	23.5	12,521	76.5	16,364
Kiteto	13,977	54.7	11,593	45.3	25,569
Total	88,121	57.1	66,073	42.9	154,194

7.2g ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fungicide Use and District During 2002/03 Crop Year LONG RAINY SEASON

District	Fungicide Use						% of area planted under Fungicide
	Households Using Fungicide		Households Not Using Fungicide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	924	1,856	45,260	54,979	46,184	56,835	3.3
Hanang	1,407	3,938	29,536	54,530	30,944	58,469	6.7
Mbulu	518	444	33,001	39,113	33,519	39,557	1.1
Simanjiro	479	610	13,262	31,258	13,741	31,868	1.9
Kiteto	136	1,147	24,840	73,364	24,976	74,511	1.5
Total	3,464	7,995	145,900	253,244	149,363	261,239	3.1

7.2h ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Improved Seed Use and District During 2002/03 Crop Year - LONG RAINY SEASON

District	Improved Seed Use						% of area planted under Improved Seeds
	Households Using Improved Seed		Households Not Using Improved Seed		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Babati	7,097	10,600	39,087	46,235	46,184	56,835	18.6
Hanang	2,949	8,619	27,994	49,850	30,944	58,469	14.7
Mbulu	6,156	6,691	27,363	32,865	33,519	39,557	16.9
Simanjiro	4,132	7,999	9,609	23,869	13,741	31,868	25.1
Kiteto	3,232	12,075	21,745	62,437	24,976	74,511	16.2
Total	23,566	45,983	125,797	215,257	149,363	261,239	17.6
Total	25160	47278	130100	217982	155261	265260	18

Table 7.2.1 Number of Agricultural Households, Area Planted (ha) and Quantity of Maize Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Maize										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	1,284	726	830	1.14	43,775	35,491	51,491	1.45	36,217	52,321	1.44
Hanang	79	95	24	0.25	30,863	35,232	27,543	0.78	35,328	27,567	0.78
Mbulu	3,207	1,225	1,418	1.16	31,788	22,818	19,066	0.84	24,043	20,483	0.85
Simanjiro	314	293	557	1.90	13,170	22,831	10,294	0.45	23,124	10,851	0.47
Kiteto	0	0	0	0.00	24,878	69,186	36,551	0.53	69,186	36,551	0.53
Total	4,883	2,339	2,828	1.21	144,475	185,559	144,945	0.78	187,898	147,773	0.79

Table 7.2.2 Number of Agricultural Households, Area Planted (ha) and Quantity of Paddy Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Paddy										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	2,942	1,817	6,148	3.38	1,817	6,148	3.38
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	348	213	527	2.47	213	527	2.47
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	3,289	2,031	6,674	3.29	2,031	6,674	3.29

Table 7.2.3 Number of Agricultural Households, Area Planted (ha) and Quantity of Sorghum Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Sorghum										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	352	166	234	1.41	7,168	3,821	2,857	0.75	3,987	3,091	0.78
Hanang	79	32	8	0.25	2,311	1,147	352	0.31	1,179	360	0.31
Mbulu	343	78	88	1.13	5,461	1,345	523	0.39	1,423	611	0.43
Simanjiro	0	0	0	0.00	45	73	5	0.06	73	5	0.06
Kiteto	0	0	0	0.00	123	108	11	0.10	108	11	0.10
Total	774	276	330	1.20	15,108	6,495	3,747	0.58	6,771	4,078	0.60

Table 7.2.4 Number of Agricultural Households, Area Planted (ha) and Quantity of Fingermillet Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Fingermillet										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	920	531	667	1.26	531	667	1.26
Hanang	0	0	0	0.00	2,828	1,864	1,133	0.61	1,864	1,133	0.61
Mbulu	433	97	25	0.26	1,807	299	144	0.48	396	169	0.43
Simanjiro	0	0	0	0.00	44	53	94	1.78	53	94	1.78
Kiteto	0	0	0	0.00	822	933	580	0.62	933	580	0.62
Total	433	97	25	0.26	6,420	3,679	2,618	0.71	3,775	2,643	0.70

Table 7.2.5 Number of Agricultural Households, Area Planted (ha) and Quantity of Bulrushmillets Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Bulrushmillets										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	158	147	11	0.07	147	11	0.07
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	333	246	89	0.36	246	89	0.36
Total	0	0	0	0.00	491	393	99	0.25	393	99	0.25

Table 7.2.6 Number of Agricultural Households, Area Planted (ha) and Quantity of Wheat Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Wheat										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	963	990	1,895	1.91	990	1,895	1.91
Hanang	0	0	0	0.00	1,110	805	1,404	1.75	805	1,404	1.75
Mbulu	0	0	0	0.00	592	251	221	0.88	251	221	0.88
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	2,664	2,046	3,521	1.72	2,046	3,521	1.72

Table 7.2.7 Number of Agricultural Households, Area Planted (ha) and Quantity of Barley Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Barley										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.8 Number of Agricultural Households, Area Planted (ha) and Quantity of Cassava Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cassava										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	358	137	203	1.48	137	203	1.48
Hanang	0	0	0	0.00	765	316	34	0.11	316	34	0.11
Mbulu	87	18	16	0.89	675	57	176	3.07	75	192	2.56
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	437	253	180	0.71	253	180	0.71
Total	87	18	16	0.89	2,234	763	593	0.78	781	609	0.78

Table 7.2.9 Number of Agricultural Households, Area Planted (ha) and Quantity of Sweet potatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Sweet potatoes										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	250	50	53	1.05	50	53	1.05
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	347	55	43	0.79	2,080	410	510	1.24	465	553	1.19
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	70	28	3	0.12	28	3	0.12
Total	347	55	43	0.79	2,399	488	566	1.16	543	609	1.12

Table 7.2.10 Number of Agricultural Households, Area Planted (ha) and Quantity of Irish potatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Irish potatoes										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	112	5	34	7.41	5	34	7.41
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	602	73	88	1.21	73	88	1.21
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	714	78	122	1.57	78	122	1.57

Table 7.2.11 Number of Agricultural Households, Area Planted (ha) and Quantity of Yams Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Yams										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	75	15	1	0.05	15	1	0.05
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	75	15	1	0.05	15	1	0.05

Table 7.2.11 Number of Agricultural Households, Area Planted (ha) and Quantity of Cocoyams Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cocoyams										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.12 Number of Agricultural Households, Area Planted (ha) and Quantity of Mungbeans Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Mungbeans										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.13 Number of Agricultural Households, Area Planted (ha) and Quantity of Beans Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Beans										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	555	196	117	0.60	17,328	9,726	5,108	0.53	9,922	5,225	0.53
Hanang	79	32	13	0.40	22,362	12,913	3,842	0.30	12,945	3,855	0.30
Mbulu	3,283	769	502	0.65	31,993	11,995	3,860	0.32	12,764	4,363	0.34
Simanjiro	0	0	0	0.00	5,914	8,127	2,384	0.29	8,127	2,384	0.29
Kiteto	0	0	0	0.00	2,624	2,092	551	0.26	2,092	551	0.26
Total	3,917	997	632	0.63	80,222	44,854	15,745	0.35	45,851	16,377	0.36

Table 7.2.14 Number of Agricultural Households, Area Planted (ha) and Quantity of Cowpeas Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cowpeas										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	259	29	16	0.57	29	16	0.57
Simanjiro	30	6	0	0.00	300	167	40	0.24	172	40	0.23
Kiteto	0	0	0	0.00	382	254	26	0.10	254	26	0.10
Total	30	6	0	0.00	941	450	82	0.18	455	82	0.18

Table 7.2.15 Number of Agricultural Households, Area Planted (ha) and Quantity of Greengram Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Greengram										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	11	5	0.49	11	5	0.49
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	36	11	5	0.49	11	5	0.49

Table 7.2.16 Number of Agricultural Households, Area Planted (ha) and Quantity of Chick peas Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Chick peas										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	225	91	64	0.71	91	64	0.71
Hanang	0	0	0	0.00	381	186	52	0.28	186	52	0.28
Mbulu	0	0	0	0.00	402	253	169	0.67	253	169	0.67
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	1,008	530	286	0.54	530	286	0.54

Table 7.2.17 Number of Agricultural Households, Area Planted (ha) and Quantity of Bambaranuts Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Bambranuts										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	151	122	15	0.12	122	15	0.12
Kiteto	0	0	0	0.00	337	103	43	0.41	103	43	0.41
Total	0	0	0	0.00	488	225	58	0.26	225	58	0.26

Table 7.2.18 Number of Agricultural Households, Area Planted (ha) and Quantity of Fieldpeas Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Fieldpeas										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	112	9	4	0.49	9	4	0.49
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	18	18	0.99	18	18	0.99
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	148	27	23	0.82	27	23	0.82

Table 7.2.19 Number of Agricultural Households, Area Planted (ha) and Quantity of Sunflower Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Sunflower										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	4,009	3,185	1,930	0.61	3,185	1,930	0.61
Hanang	79	32	19	0.59	4,088	5,580	3,445	0.62	5,612	3,464	0.62
Mbulu	0	0	0	0.00	3,246	2,026	799	0.39	2,026	799	0.39
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	660	460	173	0.38	460	173	0.38
Total	79	32	19	0.59	12,004	11,251	6,347	0.56	11,283	6,366	0.56

Table 7.2.20 Number of Agricultural Households, Area Planted (ha) and Quantity of Simsim Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Simsim										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	427	350	98	0.28	350	98	0.28
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	11	5	0.49	11	5	0.49
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	463	361	103	0.29	361	103	0.29

Table 7.2.21 Number of Agricultural Households, Area Planted (ha) and Quantity of Groundnuts Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Groundnuts										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	125	102	38	0.37	1,097	562	249	0.44	663	286	0.43
Hanang	0	0	0	0.00	236	72	13	0.18	72	13	0.18
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	4	0	0.00	4	0	0.00
Kiteto	0	0	0	0.00	1,952	849	263	0.31	849	263	0.31
Total	125	102	38	0.37	3,322	1,486	524	0.35	1,588	562	0.35

Table 7.2.22 Number of Agricultural Households, Area Planted (ha) and Quantity of Castor oil Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Castor oil										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.23 Number of Agricultural Households, Area Planted (ha) and Quantity of Soya beans Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Soya beans										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.24 Number of Agricultural Households, Area Planted (ha) and Quantity of Okra Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Okra										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	7	34	4.69	7	34	4.69
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	36	7	34	4.69	7	34	4.69

Table 7.2.25 Number of Agricultural Households, Area Planted (ha) and Quantity of Bitter Aubergine Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Bitter Aubergine										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.26 Number of Agricultural Households, Area Planted (ha) and Quantity of Onion Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Onion										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	458	177	312	1.76	177	312	1.76
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	35	28	53	1.85	140	149	687	4.61	178	740	4.17
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	35	28	53	1.85	598	326	999	3.06	355	1,052	2.96

Table 7.2.27 Number of Agricultural Households, Area Planted (ha) and Quantity of Cabbage Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cabbage										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	7	0	0.00	7	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	36	7	0	0.00	7	0	0.00

Table 7.2.28 Number of Agricultural Households, Area Planted (ha) and Quantity of Tomatoes Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Tomatoes										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	235	24	49	2.07	104	40	489	12.17	64	538	8.42
Hanang	0	0	0	0.00	75	15	38	2.47	15	38	2.47
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	225	62	314	5.03	62	314	5.03
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	235	24	49	2.07	404	118	841	7.13	142	890	6.28

Table 7.2.29 Number of Agricultural Households, Area Planted (ha) and Quantity of Spinnach Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Spinnach										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	117	12	5	0.40	0	0	0	0.00	12	5	0.40
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	117	12	5	0.40	0	0	0	0.00	12	5	0.40

Table 7.2.30 Number of Agricultural Households, Area Planted (ha) and Quantity of Carrot Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Carrot										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.31 Number of Agricultural Households, Area Planted (ha) and Quantity of Chillies Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Chillies										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	4	0	0.00	4	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	36	4	0	0.00	4	0	0.00

Table 7.2.32 Number of Agricultural Households, Area Planted (ha) and Quantity of Amaranths Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Amaranths										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	0	0	0	0.00	0	0	0	0.00	0	0	0.00

Table 7.2.33 Number of Agricultural Households, Area Planted (ha) and Quantity of Pumpkins Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Pumpkins										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	117	12	4	0.30	0	0	0	0.00	12	4	0.30
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	117	12	4	0.30	0	0	0	0.00	12	4	0.30

Table 7.2.34 Number of Agricultural Households, Area Planted (ha) and Quantity of Cucumber Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cucumber										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	117	12	2	0.15	0	0	0	0.00	12	2	0.15
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	4	0	0.00	4	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	117	12	2	0.15	36	4	0	0.00	16	2	0.11

Table 7.2.35 Number of Agricultural Households, Area Planted (ha) and Quantity of Eggplant Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Eggplant										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	117	12	2	0.15	0	0	0	0.00	12	2	0.15
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	117	12	2	0.15	0	0	0	0.00	12	2	0.15

Table 7.2.36 Number of Agricultural Households, Area Planted (ha) and Quantity of Water Mellon Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Water Mellon										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	117	12	23	1.98	0	0	0	0.00	12	23	1.98
Hanang	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0.00	36	4	18	4.94	4	18	4.94
Kiteto	0	0	0	0.00	0	0	0	0.00	0	0	0.00
Total	117	12	23	1.98	36	4	18	4.94	16	41	2.67

Table 7.2.37 Number of Agricultural Households, Area Planted (ha) and Quantity of Cauliflower Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cauliflower										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	0	0	0	0.00	0	0	0.00

Table 7.2.38 Number of Agricultural Households, Area Planted (ha) and Quantity of Cotton Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Cotton										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0	0	0	0	0.00	0	0	0.00
Hanang	0	0	0	0	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	0	0	0	0.00	0	0	0.00

Table 7.2.39 Number of Agricultural Households, Area Planted (ha) and Quantity of Tobacco Harvested (tons) by Season and District; 2002/03 Agricultural Year

District	Tobacco										
	Short Rainy bseason				Long Rainy bSeason				Total		
	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Number of Household	Area Planted	Quantity Harvested	Yield (tons/ha)	Area Planted	Quantity Harvested	Yield (tons/ha)
Babati	0	0	0	0	125	30	25	0.82	30	25	0.82
Hanang	0	0	0	0	0	0	0	0.00	0	0	0.00
Mbulu	0	0	0	0	0	0	0	0.00	0	0	0.00
Simanjiro	0	0	0	0	0	0	0	0.00	0	0	0.00
Kiteto	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	125	30	25	0.82	30	25	0.82

PERMANENT CROPS

Table 7.3 PERMANENT CROPS: Number of households by Area planted (ha), Area harvested (ha) and Quantity harvested (tons)

District/Crop		Number of Households	Planted Area (ha)	Number of Households	Area Harvested (ha)	Number of Households	Quantity Harvested (tons)
Babati	Pigeon Pea	22,097	19,096	21,976	11,496	21,023	7,421
	Coffee	345	1,041	345	520	219	19
	Sugarcane	112	14	112	14	112	112
	Mpesheni	94	0	94	0	94	4
	Banana	1,052	4,393	1,156	3,673	1,025	1,332
	Avocado	210	61	210	13	115	2
	Mango	115	51	115	5	0	0
	Pawpaw	314	56	418	9	418	59
	Orange	358	150	584	103	341	1,471
	Mandarine/Tangerine	0	.	0	.	0	.
	Guava	210	52	331	5	331	15
	Lime/Lemon	115	51	115	5	115	5
Total	25,021	24,965	25,456	15,841	23,795	10,441	
Hanang	Pigeon Pea	3,137	1,391	4,440	2,737	3,912	1,090
	Banana	312	156	312	28	312	96
	Mango	80	2	80	0	0	0
	Pawpaw	78	3	78	3	158	59
	Orange	156	130	156	19	237	3
	Guava	156	121	156	10	237	10
	Lime/Lemon	0	.	0	.	80	0
	Total	3,920	1,802	5,223	2,797	4,936	1,258
Mbulu	Pigeon Pea	86	21	254	63	169	26
	Coffee	521	144	953	144	521	29
	Sugarcane	87	9	259	16	259	110
	Banana	1,043	239	3,287	332	3,027	1,180
	Mango	0	.	169	0	0	0
	Orange	0	.	339	7	173	1,769
	Guava	0	.	174	10	259	112
	Apples	0	.	86	10	86	35
	Pears	0	.	86	7	173	112
	Lime/Lemon	261	23	261	4	346	101
	Total	1,998	436	5,869	593	5,012	3,473

Table 7.3 PERMANENT CROPS: Number of households by Area planted (ha), Area harvested (ha) and Quantity harvested (tons)

District/Crop		Number of Households	Planted Area (ha)	Number of Households	Area Harvested (ha)	Number of Households	Quantity Harvested (tons)
Simanjiro	Pigeon Pea	44	21	44	21	44	31
	Banana	178	125	214	65	214	554
	Mango	75	17	75	1	38	2
	Guava	38	31	38	0	38	2
	Total	334	194	370	87	334	588
Kiteto	Pigeon Pea	3,438	6,226	3,438	3,000	3,094	952
	Mpesheni	60	24	60	0	60	1
	Banana	117	35	117	0	0	0
	Mango	0	.	386	224	311	90
	Pawpaw	0	.	132	0	192	329
	Guava	0	.	68	0	0	0
	Apples	0	.	0	.	60	1
	Total	3,615	6,285	4,200	3,224	3,717	1,373
Total	Pigeon Pea	28,801	26,755	30,152	17,318	28,242	9,520
	Coffee	866	1,185	1,298	664	741	48
	Sugarcane	199	22	371	29	371	222
	Mpesheni	154	24	154	0	154	5
	Banana	2,701	4,949	5,086	4,098	4,578	3,161
	Avocado	210	61	210	13	115	2
	Mango	270	70	825	230	349	93
	Pawpaw	392	59	628	12	768	447
	Orange	514	280	1,080	129	750	3,243
	Mandarine/Tangerine	0	.	0	.	0	0
	Guava	404	203	767	25	865	138
	Apples	0	.	86	10	146	36
	Pears	0	.	86	7	173	112
	Lime/Lemon	377	74	377	8	542	106
	Total	34,887	33,683	41,118	22,543	37,793	17,134

Cont.... Area Planted by Crop Type - Manyara Region

District/Crop	Planted Area (ha)	%
Pigeon Pea	26,755	79.4
Banana	4,949	14.7
Coffee	1,185	3.5
Orange	280	0.8
Guava	203	0.6
Lime/Lemon	74	0.2
Mango	70	0.2
Avocado	61	0.2
Pawpaw	59	0.2
Mpesheni	24	0.1
Sugarcane	22	0.1
Mandarine/Tangerine	0	0.0
Apples	0	0.0
Pears	0	0.0
Total	33,683	100.0

Cont.... Area Planted by Crop Type - Manyara Region

Pigeon pea					
District	Planted Area (ha)	Total Planted Area (ha)	% of Total Area Planted	Households with Pigeon pea	Average Planted Area per Household
Babati	19,096	56,835	34	22,097	0.86
Hanang	1,391	58,469	2	3,137	0.44
Mbulu	21	39,557	0	86	0.24
Simanjiro	21	31,868	0	44	0.49
Kiteto	6,226	74,511	8	3,438	1.81
Total	26,755	261,239	10	28,801	0.93

Banana					
District	Planted Area (ha)	Total Planted Area (ha)	% of Total Area Planted	Households with Banana	Average Planted Area per Household
Babati	3,673	56,835	6	1,052	3.49
Hanang	28	58,469	0	312	0.09
Mbulu	332	39,557	1	1,043	0.32
Simanjiro	65	31,868	0	178	0.36
Kiteto	0	74,511	0	117	0.00
Total	4,098	261,239	2	2,701	1.52

Cont.... Area Planted by Crop Type - Manyara Region

Crop	Fertiliser Use				Total
	Mostly Farm Yard Manure	Mostly Compost	Mostly Inorganic Fertilizer	No Fertilizer Applied	
Pigeon Pea	3,198	0	558	22,999	26,755
Coffee	1,123	0	9	53	1,185
Sugarcane	0	0	0	9	9
Mpesheni	24	0	0	0	24
Banana	4,679	25	0	245	4,949
Avocado	61	0	0	0	61
Mango	51	0	0	19	70
Pawpaw	59	0	0	0	59
Orange	280	0	0	0	280
Mandarine/Tangerine	0	0	0	0	0
Guava	86	0	0	118	203
Apples	0	0	0	0	0
Pears	0	0	0	0	0
Lime/Lemon	55	0	0	9	64
Total	9,617	25	567	23,451	33,659

Cont.... Area Planted by Crop Type - Manyara Region

Crop	Mostly Farm Yard Manure	Total	%
Mpesheni	24	24	100
Avocado	61	61	100
Pawpaw	59	59	100
Orange	280	280	100
Coffee	1,123	1,185	95
Banana	4,679	4,949	95
Lime/Lemon	55	64	86
Mango	51	70	73
Guava	86	203	42
Pigeon Pea	3,198	26,755	12
Sugarcane	0	9	0
Mandarine/Tangerine	0	0	0
Apples	0	0	0
Pears	0	0	0
Total	9,617	33,659	29

Cont.... Area Planted by Crop Type - Manyara Region

Crop	Mostly Compost	Total	%
Banana	25	4,949	1
Pigeon Pea	0	26,755	0
Coffee	0	1,185	0
Sugarcane	0	9	0
Mpesheni	0	24	0
Avocado	0	61	0
Mango	0	70	0
Pawpaw	0	59	0
Orange	0	280	0
Mandarine/Tangerine	0	0	0
Guava	0	203	0
Apples	0	0	0
Pears	0	0	0
Lime/Lemon	0	64	0
Total	25	33,659	0

Cont.... Area Planted by Crop Type - Manyara Region

Crop	Mostly Inorganic Fertilizer	Total	%
Pigeon Pea	558	26,755	2
Coffee	9	1,185	1
Sugarcane	0	9	0
Mpesheni	0	24	0
Banana	0	4,949	0
Avocado	0	61	0
Mango	0	70	0
Pawpaw	0	59	0
Orange	0	280	0
Mandarine/Tangerine	0	0	0
Guava	0	203	0
Apples	0	0	0
Pears	0	0	0
Lime/Lemon	0	64	0
Total	567	33,659	2

AGROPROCESSING

8.1.1c AGRO PROCESSING: Number of Crop Growing Households By Where Product Sold During 2002/03 Agriculture Year and District

District	Where Sold									Total
	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	
Babati	357	0	117	0	0	0	0	14,209	30,038	44,721
Hanang	389	77	0	227	0	0	938	314	24,101	26,045
Mbulu	173	0	0	0	0	87	0	0	33,008	33,267
Simanjiro	209	178	0	0	0	0	0	49	7,727	8,163
Kiteto	403	65	0	0	121	0	330	1,110	21,946	23,975
Total	1,531	320	117	227	121	87	1,268	15,683	116,818	136,172

8.1.1d AGRO PROCESSING: Number of Crop Growing Households By Main Product During 2002/03 Agriculture Year and District

District	Main Product						Total
	Flour / Meal	Grain	Oil	Juice	Fiber	Other	
Babati	43,193	1,292	236	0	0	0	44,721
Hanang	24,966	771	308	0	0	0	26,045
Mbulu	31,192	1,911	79	85	0	0	33,267
Simanjiro	7,618	489	0	0	12	44	8,163
Kiteto	23,659	317	0	0	0	0	23,975
Total	130,628	4,780	623	85	12	44	136,172

8.1.1e AGRO PROCESSING: Number of Crop Growing Households By Use of Primary Processed Product During 2002/03 Agriculture Year and District

District	Product Use				Total
	Household / Human Consumption	Sale Only	Animal Consumption	Did Not Use	
Babati	44,481	118	0	121	44,721
Hanang	25,887	80	0	79	26,045
Mbulu	33,093	0	174	0	33,267
Simanjiro	8,076	60	0	27	8,163
Kiteto	23,975	0	0	0	23,975
Total	135,512	258	174	227	136,172

8.1.1f AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2003/04 Agriculture Year By Location of Sale of Product and Crop

Crop	Where Sold									
	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	Total
Total	1,543	295	0	227	121	87	1,268	13,747	115,380	132,668
Maize	117	25	117	0	0	0	469	592	1,475	2,796
Paddy	87	0	0	0	0	0	0	3,594	3,052	6,733
Sorghum	0	0	0	0	0	0	0	0	343	343
Bulrush	139	0	0	0	0	0	0	314	774	1,227
Millet	0	0	0	0	0	0	0	0	591	591
Finger Millet	0	0	0	87	0	0	0	361	1,297	1,744
Wheat	0	0	0	0	0	0	0	0	189	189
Beans	87	0	0	0	0	0	85	793	776	1,741
Pigeon Peas	0	0	0	0	0	0	0	0	36	36
Sunflower	354	0	0	0	0	0	0	0	338	692
Simsim	0	0	86	87	0	0	0	0	0	173
Groundnut	0	0	0	0	0	0	0	0	0	0
Coffee	2,327	320	204	401	121	87	1,822	19,401	124,251	148,933

8.1.1g AGRO PROCESSING: Number of Crop Growing Households By By-Product During 2002/03 Agriculture Year and District

District	By Product								Total
	Bran	Cake	Husk	Pulp	Oil	Shell	No by-product	Other	
Babati	2,649	118	118	0	0	0	41,710	125	44,721
Hanang	4,156	311	0	0	393	78	21,107	0	26,045
Mbulu	3,685	972	0	87	0	0	28,435	87	33,267
Simanjiro	682	36	230	0	43	0	7,172	0	8,163
Kiteto	2,446	0	0	0	65	70	21,354	41	23,975
Total	13,619	1,437	347	87	500	148	119,779	254	136,172

STORAGE

9.2a CROP STORAGE: Number of Households Storing Crops By Method of Storage and District

District	Method of Storage							Total
	In Locally Made Traditional Structure	In Improved Locally Made Structure	In Modern Store	In Sacks / Open Drum	In Airtight Drum	Unprotected Pile	Other	
Babati	20,493	1,208	114	20,580	251	0	0	42,646
Hanang	14,282	79	75	9,367	78	0	0	23,881
Mbulu	16,455	688	0	9,621	0	0	260	27,025
Simanjiro	405	487	45	5,706	170	0	48	6,860
Kiteto	4,316	206	0	17,781	69	277	191	22,840
Total	55,950	2,669	235	63,055	567	277	499	123,252

9.2b CROP STORAGE: Number of Households Storing Crops By

District	Normal Duration of Storage			
	Less than 3 Months	Between 3 and 6 Months	Over 6 Months	Total
Babati	2,503	14,059	26,084	42,646
Hanang	3,084	11,106	9,691	23,881
Mbulu	5,463	15,782	5,780	27,025
Simanjiro	1,276	3,729	1,856	6,860
Kiteto	3,940	10,402	8,498	22,840
Total	16,266	55,077	51,909	123,252

9.2c CROP STORAGE: Number of Households Storing Crops By Main Purpose

District	Main Purpose				Total
	Food for the Household	To Sell for Higher Price	Seeds for Planting	Other	
Babati	41,128	1,040	478	0	42,646
Hanang	22,878	382	621	0	23,881
Mbulu	26,334	172	519	0	27,025
Simanjiro	6,097	12	751	0	6,860
Kiteto	22,205	510	59	66	22,840
Total	118,642	2,117	2,428	66	123,252

9.2d CROP STORAGE: Number of Households Storing Crops By Estimated

District	Estimate Storage Loss				Total
	Little or no Loss	Up to 1/4 Loss	Between 1/4 and 1/2 Loss	Over 1/2 Loss	
Babati	34,324	6,173	1,431	719	42,646
Hanang	17,621	3,850	929	1,481	23,881
Mbulu	23,547	2,388	833	257	27,025
Simanjiro	6,182	515	125	38	6,860
Kiteto	19,252	3,039	434	116	22,840
Total	100,924	15,964	3,753	2,611	123,252

MARKETING

10.1 MARETING: Number of Crop Producing Households Reporting Selling Agricultural Products During 2003/04 By District

District	Did the Hh Sell any Crops from the 2002/03 season?					
	Number of Households that		Number of Households		Total	
	Number	%	Number	%	Number	%
Babati	37,585	80.6	9,050	19.4	46,635	100.0
Hanang	16,241	52.0	15,004	48.0	31,245	100.0
Mbulu	16,476	47.9	17,906	52.1	34,381	100.0
Simanjiro	3,843	23.5	12,521	76.5	16,364	100.0
Kiteto	13,977	54.7	11,593	45.3	25,569	100.0
Total	88,121	57.1	66,073	42.9	154,194	100.0

10.2 MARKETING: Number of Households Reporting Selling Crop By Main Marketing Problem By District

District	Main Problem											Total
	Open Market Price Too Low	No Transport	Transport Cost Too High	No Buyer	Market too Far	Farmers Association Problems	Trade Union Problems	Government Regulatory Board Problems	Lack of Market Information	Other	Not applicable	
Babati	13,277	2,214	1,663	125	1,887	110	0	125	1,978	0	16,206	37,585
Hanang	6,204	476	471	160	708	0	0	0	230	0	7,993	16,241
Mbulu	4,062	3,101	609	0	3,631	0	0	0	86	0	4,986	16,476
Simanjiro	1,265	72	378	45	374	0	0	0	82	86	1,541	3,843
Kiteto	8,548	445	877	557	1,913	0	70	0	348	69	1,149	13,977
Total	33,357	6,308	3,998	886	8,513	110	70	125	2,725	155	31,875	88,121

10.3 MARETING: Number of Crop Producing Households Reporting Not Selling Agricultural Products During 2003/04 By

District	Main Reasons for Not Selling Crops								Total
	Price Too Low	Production Insufficient to Sell	Market Too Far	Farmers Association Problems	Co-operative Problems	Trade Union Problems	Other	Not applicable	
Babati	723	10,991	117	0	343	125	541	32,217	45,058
Hanang	63	12,593	0	75	0	311	2,239	14,883	30,164
Mbulu	319	17,051	0	0	0	247	156	15,418	33,191
Simanjiro	50	5,666	0	0	35	0	3,148	7,309	16,208
Kiteto	431	9,372	68	0	0	0	1,203	14,427	25,501
Total	1,586	55,673	185	75	379	684	7,286	84,254	150,123

IRRIGATION/ EROSION CONTROL

Table 11.1: Number and Percent of Crop Growing Households Reporting of Practicing Irrigation During 2002/03 Agriculture Year By

District	Does the Household Practice Irrigation?				
	Households Practicing Irrigation		Households not Practicing Irrigation		Total
	Number of Household	%	Number of Household	%	Number of Household
Babati	2,928	6.3	43,707	93.7	46,635
Hanang	150	0.5	31,095	99.5	31,245
Mbulu	2,185	6.4	32,197	93.6	34,381
Simanjiro	1,251	7.6	15,113	92.4	16,364
Kiteto	60	0.2	25,509	99.8	25,569
Total	6,574	4.3	147,620	95.7	154,194

11.2: IRRIGATION: Area of Irrigated and Non Irrigatable (ha) Land By District

District	Irrigatable Area	Area Irrigated Land this Year	%
Babati	1,756	1,659	94
Hanang	128	128	100
Mbulu	878	674	77
Simanjiro	1,779	1,280	72
Kiteto	24	10	40
Total	4,565	3,751	82

11.3: IRRIGATION: Number of Households Using Irrigation By Source of Irrigation Water During 2003/04 Agricultural Year By District

District	Source of Irrigation Water						Total
	River	Dam	Well	Borehole	Canal	Pipe water	
Babati	2,224	118	117	234	235	0	2,928
Hanang	0	0	0	0	150	0	150
Mbulu	1,324	0	260	87	513	0	2,185
Simanjiro	1,029	0	0	0	221	0	1,251
Kiteto	0	0	0	0	0	60	60
Total	4,578	118	378	321	1,120	60	6,574

11.4: IRRIGATION: Number of Households Using Irrigation By Method of Irrigation of Obtaining Water By District

District	Method of Obtaining Water			
	Gravity	Hand Bucket	Motor Pump	Total
Babati	2,577	352	0	2,928
Hanang	150	0	0	150
Mbulu	972	1,212	0	2,185
Simanjiro	1,215	0	36	1,251
Kiteto	0	60	0	60
Total	4,914	1,624	36	6,574

11.5: IRRIGATION: Number of Households Using Irrigation By Method of Irrigation Application By District

District	Method of Application		
	Flood	Bucket / Watering Can	Total
Babati	2,577	352	2,928
Hanang	150	0	150
Mbulu	972	1,212	2,185
Simanjiro	1,251	0	1,251
Kiteto	0	60	60
Total	4,950	1,624	6,574

11.6: IRRIGATION: Number of Households With Erosion Control/Water Harvesting Facilities on their Land By District

District	Does the Household Have Any Erosion Control/Water				
	Have facility		Does Not Have Facility		Total
	Number	%	Number	%	
Babati	11,805	25	34,829	75	46,635
Hanang	3,417	11	27,828	89	31,245
Mbulu	6,626	19	27,755	81	34,381
Simanjiro	655	4	15,709	96	16,364
Kiteto	983	4	24,586	96	25,569
Total	23,486	15	130,708	85	154,194

11.7 EROSION CONTROL: Number of Erosion Control Harvesting Structures By Type and District

District	Type of Erosion Control								
	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Dam	Total
Babati	.	24,504	469	4,986	1,457	18,661	861	.	50,938
Hanang	75	7,952	.	779	226	1,887	1,021	.	11,941
Mbulu	.	18,858	609	4,896	314	5,686	3,125	84	33,573
Simanjiro	382	4,968	.	191	955	922	650	.	8,068
Kiteto	113	2,933	.	117	350	139	271	65	3,988
Total	571	59,216	1,078	10,969	3,302	27,296	5,927	149	108,509

ACCESS TO FARM INPUTS/ IMPLEMENTS

12.1.1 ACCESS TO INPUTS: Number of Agricultural Households Using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	0	0	46,635	100	46,635	100
Hanang	309	1	30,936	99	31,245	100
Mbulu	0	0	34,381	100	34,381	100
Simanjiro	660	4	15,705	96	16,364	100
Kiteto	0	0	25,569	100	25,569	100
Total	969	1	153,226	99	154,194	100

12.1.2 ACCESS TO INPUTS: Number of Agricultural Households Using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	20,502	44	26,133	56	46,635	100
Hanang	8,242	26	23,002	74	31,245	100
Mbulu	26,666	78	7,715	22	34,381	100
Simanjiro	2,015	12	14,377	88	16,392	100
Kiteto	1,093	4	24,517	96	25,610	100
Total	58,519	38	95,744	62	154,263	100

12.1.3 ACCESS TO INPUTS: Number of Agricultural Households Using COMPOST Manure by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	445	1	46,189	99	46,635	100
Hanang	1,937	6	29,308	94	31,245	100
Mbulu	696	2	33,686	98	34,381	100
Simanjiro	163	1	16,202	99	16,364	100
Kiteto	194	1	25,375	99	25,569	100
Total	3,434	2	150,760	98	154,194	100

12.1.4 ACCESS TO INPUTS: Number of Agricultural Households Using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	3,593	8	43,042	92	46,635	100
Hanang	1,879	6	29,366	94	31,245	100
Mbulu	1,624	5	32,757	95	34,381	100
Simanjiro	1,198	7	15,166	93	16,364	100
Kiteto	958	4	24,612	96	25,569	100
Total	9,252	6	144,942	94	154,194	100

12.1.5 ACCESS TO INPUTS: Number of Agricultural Households Using Herbicides by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	724	2	45,910	98	46,635	100
Hanang	634	2	30,611	98	31,245	100
Mbulu	0	0	34,381	100	34,381	100
Simanjiro	265	2	16,072	98	16,336	100
Kiteto	67	0	25,502	100	25,569	100
Total	1,691	1	152,476	99	154,166	100

12.1.6 ACCESS TO INPUTS: Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	6,867	15	39,768	85	46,635	100
Hanang	1,935	6	29,310	94	31,245	100
Mbulu	4,965	14	29,417	86	34,381	100
Simanjiro	3,686	23	12,678	77	16,364	100
Kiteto	3,040	12	22,488	88	25,528	100
Total	20,492	13	133,661	87	154,153	100

12.1.7 ACCESS TO INPUTS: Number of Agricultural Households and Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Local Market / Trade Store		Not applicable		Total	
	Number	%	Number	%	Number	%
Babati	0	0	46,635	100	46,635	100
Hanang	309	1	30,936	99	31,245	100
Mbulu	0	0	34,381	100	34,381	100
Simanjiro	660	4	15,668	96	16,328	100
Kiteto	0	0	25,569	100	25,569	100
Total	969	1	153,190	99	154,158	100

12.1.8 ACCESS TO INPUTS: Number of Agricultural Households and Source of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Co-operative		Local Farmers Group		Local Market / Trade Store		Secondary Market		Development Project	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	113	0	0	0	117	0	0	0	0	0
Hanang	0	0	0	0	80	0	78	0	78	0
Mbulu	86	0	87	0	174	1	84	0	0	0
Simanjiro	0	0	0	0	75	0	0	0	0	0
Kiteto	70	0	0	0	67	0	0	0	0	0
Total	269	0	87	0	514	0	163	0	78	0

12.1.19 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Sale of Farm Products		generating activities		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Hanang	309	100	0	0	0	0	309	100
Simanjiro	350	53	274	42	36	5	660	100
Total	659	68	274	28	36	4	969	100

12.1.20 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Farm

District	Sale of Farm Products		generating activities		Remittances		Bank Loan		Produced on form		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	17,612	86	1,704	8	239	1	0	0	339	2	608	3	20,502	100
Hanang	6,844	83	776	9	78	1	0	0	0	0	545	7	8,242	100
Mbulu	20,685	78	1,189	4	169	1	160	1	1,047	4	3,416	13	26,666	100
Simanjiro	796	40	225	11	98	5	0	0	0	0	896	44	2,015	100
Kiteto	726	66	41	4	0	0	0	0	326	30	0	0	1,093	100
Total	46,663	80	3,935	7	585	1	160	0	1,712	3	5,465	9	58,519	100

12.1.21 ACCESS TO INPUTS: Number of Agricultural Households

District	Sale of Farm Products		Bank Loan		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Babati	445	100	0	0	0	0	445	100
Hanang	1,860	96	0	0	77	4	1,937	100
Mbulu	609	88	87	12	0	0	696	100
Simanjiro	163	100	0	0	0	0	163	100
Kiteto	194	100	0	0	0	0	194	100
Total	3,271	95	87	3	77	2	3,434	100

12.1.22 ACCESS TO INPUTS: Number of Agricultural Households and Source of Finance for buying Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Sale of Farm Products		generating activities		Remittances		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	2,987	83	480	13	125	3	0	0	3,593	100
Hanang	1,724	92	80	4	0	0	75	4	1,879	100
Mbulu	1,194	74	430	26	0	0	0	0	1,624	100
Simanjiro	801	67	362	30	0	0	36	3	1,198	100
Kiteto	619	65	338	35	0	0	0	0	958	100
Total	7,325	79	1,690	18	125	1	111	1	9,252	100

12.1.31 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Total	
	Number	%	Number	%	Number	%	Number	%
Hanang	0	0	309	100	0	0	309	100
Simanjiro	75	11	326	49	259	39	660	100
Total	75	8	635	66	259	27	969	100

12.1.32 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	3,931	19	15,475	75	1,096	5	0	0	20,502	100
Hanang	3,355	41	3,960	48	928	11	0	0	8,242	100
Mbulu	8,252	31	12,177	46	6,067	23	170	1	26,666	100
Simanjiro	608	30	614	30	755	37	38	2	2,015	100
Kiteto	527	48	566	52	0	0	0	0	1,093	100
Total	16,673	28	32,793	56	8,845	15	208	0	58,519	100

12.1.33 ACCESS TO INPUTS: Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Total	
	Number	%	Number	%	Number	%	Number	%
Babati	219	49	104	23	122	27	445	100
Hanang	302	16	1,480	76	155	8	1,937	100
Mbulu	87	13	87	12	522	75	696	100
Simanjiro	44	27	118	73	0	0	163	100
Kiteto	0	0	194	100	0	0	194	100
Total	653	19	1,983	58	799	23	3,434	100

12.1.34 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Does not Work		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	1,046	29	2,066	58	355	10	125	3	3,593	100
Hanang	628	33	1,020	54	231	12	0	0	1,879	100
Mbulu	334	21	948	58	342	21	0	0	1,624	100
Simanjiro	168	14	777	65	253	21	0	0	1,198	100
Kiteto	347	36	472	49	139	15	0	0	958	100
Total	2,523	27	5,284	57	1,320	14	125	1	9,252	100

12.1.35 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year

District	Excellent		Good		Poor		Total	
	Number	%	Number	%	Number	%	Number	%
Babati	603	83	121	17	0	0	724	100
Hanang	80	13	554	87	0	0	634	100
Simanjiro	109	41	144	54	12	5	265	100
Kiteto	0	0	67	100	0	0	67	100
Total	792	47	887	52	12	1	1,691	100

12.1.36 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Improved Seeds by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	2,219	32	3,621	53	815	12	212	3	6,867	100
Hanang	1,473	76	461	24	0	0	0	0	1,935	100
Mbulu	2,320	47	2,123	43	521	10	0	0	4,965	100
Simanjiro	1,011	27	2,039	55	587	16	48	1	3,686	100
Kiteto	459	15	2,110	69	472	16	0	0	3,040	100
Total	7,482	37	10,355	51	2,395	12	261	1	20,492	100

12.1.37 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	1,585	3	45,050	97	46,635	100
Hanang	543	2	30,702	98	31,245	100
Mbulu	339	1	34,042	99	34,381	100
Simanjiro	1,596	10	14,768	90	16,364	100
Kiteto	227	1	25,343	99	25,569	100
Total	4,290	3	149,904	97	154,194	100

12.1.38 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Farm Yard Manure by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	28,401	61	18,234	39	46,635	100
Hanang	15,539	50	15,705	50	31,245	100
Mbulu	28,958	84	5,424	16	34,381	100
Simanjiro	7,972	49	8,420	51	16,392	100
Kiteto	3,080	12	22,530	88	25,610	100
Total	83,951	54	70,312	46	154,263	100

12.1.39 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year COMPOST Manure by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	3,445	7	43,190	93	46,635	100
Hanang	3,815	12	27,430	88	31,245	100
Mbulu	2,332	7	32,049	93	34,381	100
Simanjiro	920	6	15,444	94	16,364	100
Kiteto	965	4	24,605	96	25,569	100
Total	11,477	7	142,718	93	154,194	100

12.1.40 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	5,840	13	40,795	87	46,635	100
Hanang	5,829	19	25,416	81	31,245	100
Mbulu	2,633	8	31,748	92	34,381	100
Simanjiro	6,000	37	10,364	63	16,364	100
Kiteto	4,961	19	20,608	81	25,569	100
Total	25,263	16	128,932	84	154,194	100

12.1.41 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Herbicides by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	2,626	6	44,009	94	46,635	100
Hanang	1,579	5	29,665	95	31,245	100
Mbulu	173	1	34,208	99	34,381	100
Simanjiro	1,660	10	14,676	90	16,336	100
Kiteto	672	3	24,897	97	25,569	100
Total	6,712	4	147,455	96	154,166	100

12.1.42 ACCESS TO INPUTS: Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year

District	Agricultural Households		Agricultural Households		Total	
	Number	%	Number	%	Number	%
Babati	17,452	37	29,183	63	46,635	100
Hanang	11,490	37	19,755	63	31,245	100
Mbulu	7,552	22	26,829	78	34,381	100
Simanjiro	11,371	69	4,993	31	16,364	100
Kiteto	6,511	26	19,017	74	25,528	100
Total	54,376	35	99,777	65	154,153	100

AGRICULTURE CREDIT

13.2a AGRICULTURE CREDIT: Number of Households Receiving Credit By Sex of Household Member Receiving Credit By District

District	Male		Female		Total	
	Number	%	Number	%	Number	%
Babati	0	0	94	100	94	100
Hanang	74	100	0	0	74	100
Simanjiro	41	42	56	58	97	100
Total	114	43	150	57	264	100

13.2b AGRICULTURE CREDIT: Number of Households Receiving Credit By Source of Credit By District

District	Source of Credit		
	Family, Friend and Relative	Other	Total
Babati	0	94	94
Hanang	74	0	74
Simanjiro	97	0	97
Total	170	94	264

13.2c AGRICULTURE CREDIT: Number of Households Receiving Credit By Reason for Not Using Credit By District

District	Reason for Not Using Credit									Total
	Not needed	Not available	Did not want to go into debt	Interest rate/cost too high	Did not know how to get credit	Difficult bureaucracy procedure	Credit granted too late	Other	Don't know about credit	
Babati	3,205	7,335	3,519	698	16,199	581	454	115	14,435	46,541
Hanang	624	5,765	3,017	782	11,577	370	80	151	8,806	31,171
Mbulu	974	7,404	1,387	0	8,530	174	73	86	15,753	34,381
Simanjiro	816	834	1,132	261	9,042	91	129	130	3,833	16,268
Kiteto	458	4,581	1,590	372	9,350	826	66	0	8,326	25,569
Total	6,077	25,919	10,645	2,113	54,697	2,043	802	482	51,153	153,930

13.2d AGRICULTURE CREDIT: Number of Credit Facilities Received By Main Purpose of Credit and District

District	Credit Use							Total Credits
	Labour	Seeds	Fertilizers	Agro-chemicals	Tools / Equipment	Livestock	Other	
Babati	0	0	0	0	0	0	94	94
Hanang	74	74	0	0	74	74	0	295
Simanjiro	69	41	28	28	0	0	69	234
Total Credits	142	114	28	28	74	74	163	623

T

TREE FARMING AND AGROFORESTRY

14.1 ON FARM TREE FARMING: Number of Households Having Planted Trees By District

District	Did your Hh have any Planted Trees on your land during 2002/					
	Households Having Planted Trees		Households Not Having Planted Trees		Total	
	Number	%	Number	%	Number	%
Babati	7,824	17	38,811	83	46,635	100
Hanang	1,227	4	30,018	96	31,245	100
Mbulu	3,348	10	31,033	90	34,381	100
Simanjiro	541	3	15,823	97	16,364	100
Kiteto	570	2	24,999	98	25,569	100
Total	13,510	9	140,684	91	154,194	100

14.2 TREE FARMING: Number of Households with Planted Trees on their Land and and Number of Trees by Planting Location and District

District	Where Planted							
	Mostly on Field / Plot Boundaries		Mostly Scattered in Field		Mostly in Plantation / Coppice		Total	
	Number of Households	Number of Trees	Number of Households	Number of Trees	Number of Households	Number of Trees	Number of Households	Number of Trees
Babati	5,893	147,058	1,507	21,040	424	38,787	7,824	206,885
Hanang	931	16,688	232	5,702	63	22,225	1,227	44,614
Mbulu	1,803	94,189	430	28,615	1,115	403,255	3,348	526,058
Simanjiro	541	19,842	0	0	0	0	541	19,842
Kiteto	376	5,709	136	2,914	58	466	570	9,089
Total	9,544	283,485	2,305	58,270	1,661	464,733	13,510	806,488

14.3 ON FARM TREE PLANTING: Number of Planted Trees By Species and District

District	Senna Spp	Gravellis	Acacia Spp	Pinus Spp	Eucalyptus Spp	Cyprus Spp	Terminalia Catapa	Leucena Spp	Syzzygium Spp	Azadritacht a Spp	Jakaranda Spp	Albizia Spp	Moringa Spp
Babati	16,818	110,504	2,890	.	440	1,100	117	9,417	.	702	188	64,356	352
Hanang	1,913	38,996	.	.	1,507	1,884	314	.	.
Mbulu	.	341,010	.	6,621	91,708	86,720
Simanjiro	6,240	73	.	2,112	422	.	.	2,522	73	8,400	.	.	.
Kiteto	4,615	113	.	.	794	.	337	2,403	527	300	.	.	.
Total	29,586	490,696	2,890	8,732	94,871	87,820	454	14,342	599	11,287	502	64,356	352

14.4 TREE FARMING: Main Use of Trees By District

District	Main Use						Total
	Planks / Timber	Poles	Fuel for Wood	Shade	Medicinal	Other	
Babati	6,432	911	1,668	832	333	0	10,175
Hanang	841	0	235	229	314	0	1,620
Mbulu	2,856	687	1,099	0	0	0	4,642
Simanjiro	159	45	156	374	49	0	783
Kiteto	0	0	371	184	192	60	807
Total	10,288	1,644	3,528	1,619	889	60	18,028

14.5 TREE FARMING: Second Use of Trees By District

District	Second Use						Total
	Planks / Timber	Poles	Fuel for Wood	Shade	Medicinal	Other	
Babati	1,429	2,355	5,449	941	0	0	10,175
Hanang	239	75	1,153	154	0	0	1,620
Mbulu	770	1,360	2,165	260	0	0	4,556
Simanjiro	45	49	244	290	83	73	783
Kiteto	60	186	184	377	0	0	807
Total	2,544	4,025	9,195	2,021	83	73	17,941

14.6 TREE FARMING: Number of Households By Whether Village Have a Community Tree Planting Scheme By District

District	does your village have a Community Tree Planting Scheme					
	Have a Community Tree Planting Scheme		Does not Have a Community Tree Planting Scheme		Total	
	Number	%	Number	%	Number	%
Babati	7,739	17	38,895	83	46,635	100
Hanang	1,183	4	29,982	96	31,165	100
Mbulu	5,445	16	28,936	84	34,381	100
Simanjiro	131	1	16,205	99	16,336	100
Kiteto	139	1	25,102	99	25,241	100
Total	14,637	10	139,121	90	153,758	100

14.7 TREE FARMING: Number of Households By Distance to Community Planted Forest (Km) By District

District	Distance to Community Planted Forest (km)						Total
	0-9	1-19	21-29	30-39	40-49	60+	
Babati	4,703	660	94	336	497	1,449	7,739
Hanang	621	401	160	0	0	0	1,183
Mbulu	1,986	1,459	608	523	521	348	5,445
Simanjiro	62	27	0	0	0	42	131
Kiteto	0	139	0	0	0	0	139
Total	7,372	2,687	862	859	1,018	1,840	14,637

14.8 TREE FARMING: Number of Households Involved in Community Tree Planting Scheme By Main Use and District

District	Main use during 2002/03							Total
	Poles	Timber Logs	Charcoal	Firewood	Not Ready to Use	Not Allowed to Use	Other	
Babati	1,470	112	114	1,830	2,059	2,154	0	7,739
Hanang	401	0	0	401	300	0	80	1,183
Mbulu	1,633	1,905	84	84	871	783	84	5,445
Simanjiro	12	0	0	0	27	91	0	131
Kiteto	0	0	0	0	139	0	0	139
Total	3,516	2,017	198	2,316	3,396	3,029	165	14,637

CROP EXTENTION

15.1 CROP EXTENSION" Number of Households Receiving Extension Messages By District

District	Did your Hh receive extension advice for crop production dur					
	Households Receiving		Households Not Receiving		Total	
	Number	%	Number	%	Number	%
Babati	14,204	30.5	32,431	70	46,635	100
Hanang	9,505	30.4	21,739	70	31,245	100
Mbulu	4,782	13.9	29,599	86	34,381	100
Simanjiro	5,147	31.5	11,217	69	16,364	100
Kiteto	5,073	19.8	20,496	80	25,569	100
Total	38,712	25.1	115,482	75	154,194	100

15.2 CROP EXTENSION: Number of Households By Quality of Extension Services By District

District	Quality of service											
	Very Good		Good		Average		Poor		No Good		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	942	6.6	9,758	68.7	1,866	13.1	1,282	9.0	357	2.5	14,204	100.0
Hanang	1,558	17.5	4,250	47.8	2,770	31.2	311	3.5	0	0.0	8,889	100.0
Mbulu	591	12.4	1,141	23.9	2,795	58.5	255	5.3	0	0.0	4,782	100.0
Simanjiro	1,194	23.2	3,138	61.0	816	15.8	0	0.0	0	0.0	5,147	100.0
Kiteto	765	15.1	3,321	65.5	988	19.5	0	0.0	0	0.0	5,073	100.0
Total	5,049	13.3	21,608	56.7	9,235	24.2	1,847	4.8	357	0.9	38,095	100.0

15.3 EXTENSION MESSAGES: Number of Households By Source of Extension Messages By District

District	Source of Crop Extension													
	Government		NGO / Development Project		Cooperative		Large Scale Farm		Other		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Babati	13,550	96.9	428	3.1	0	0.0	0	0.0	0	0.0	0	0.0	13,979	100.0
Hanang	8,496	98.2	79	0.9	0	0.0	0	0.0	0	0.0	75	0.9	8,650	100.0
Mbulu	4,698	98.2	0	0.0	0	0.0	0	0.0	84	1.8	0	0.0	4,782	100.0
Simanjiro	4,572	90.4	313	6.2	0	0.0	170	3.4	0	0.0	0	0.0	5,055	100.0
Kiteto	4,084	80.5	336	6.6	178	3.5	239	4.7	126	2.5	110	2.2	5,073	100.0
Total	35,400	94.3	1,156	3.1	178	0.5	410	1.1	210	0.6	185	0.5	37,539	100.0

15.4 EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Spacing							Use of Agrochemicals				
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Government	NGO / Development Project	Large Scale Farm	Not applicable	Total
Babati	12,597	222	0	0	0	0	12,819	2,580	0	0	0	2,580
Hanang	7,563	79	0	0	0	75	7,717	3,133	0	0	151	3,285
Mbulu	4,436	0	0	0	84	0	4,521	3,688	0	0	0	3,688
Simanjiro	3,626	224	0	86	0	0	3,936	1,220	12	41	44	1,318
Kiteto	3,491	336	121	0	70	41	4,059	1,333	134	0	109	1,577
Total	31,713	861	121	86	154	116	33,051	11,955	147	41	305	12,448

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Erosion Control						Organic Fertilizer Use					
	Government	NGO / Development Project	Cooperative	Other	Not applicable	Total	Government	NGO / Development Project	Cooperative	Other	Not applicable	Total
Babati	10,246	0	0	0	121	10,368	7,369	117	0	0	0	7,486
Hanang	3,553	0	0	0	0	3,553	5,249	0	0	0	155	5,404
Mbulu	4,005	0	0	0	87	4,092	4,181	0	0	84	0	4,265
Simanjiro	734	268	0	0	0	1,001	810	100	12	0	12	935
Kiteto	2,481	133	57	57	41	2,768	1,124	133	57	0	0	1,314
Total	21,019	401	57	57	249	21,782	18,732	351	69	84	168	19,404

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Inorganic Fertilizer Use							Use of Improved Seed						
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total
Babati	1,645	104	0	0	0	0	1,750	8,719	220	0	0	0	117	9,056
Hanang	701	0	0	0	0	75	776	4,634	0	0	0	0	160	4,795
Mbulu	3,080	0	0	0	0	0	3,080	4,015	0	0	0	0	87	4,102
Simanjiro	803	85	12	12	70	50	1,033	2,918	443	12	126	83	48	3,629
Kiteto	268	403	0	0	0	68	739	1,977	469	170	239	0	180	3,036
Total	6,497	592	12	12	70	193	7,378	22,263	1,131	183	365	83	593	24,618

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Mechanisation / LST							Irrigation Technology				
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Government	NGO / Development Project	Other	Not applicable	Total
Babati	2,069	206	0	0	0	0	2,275	2,345	112	0	0	2,457
Hanang	851	0	0	0	0	75	926	1,252	78	0	0	1,329
Mbulu	3,004	0	0	0	73	0	3,077	485	0	0	172	657
Simanjiro	1,850	121	28	259	35	0	2,293	608	137	98	0	843
Kiteto	695	539	113	125	0	0	1,472	334	337	0	137	808
Total	8,469	866	141	384	108	75	10,044	5,023	663	98	309	6,093

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Crop Storage							Vermin Control					
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Government	NGO / Development Project	Large Scale Farm	Other	Not applicable	Total
Babati	7,614	345	120	0	0	0	8,080	1,515	237	0	0	0	1,752
Hanang	5,951	77	0	0	0	80	6,109	933	0	0	0	0	933
Mbulu	3,689	0	0	0	0	73	3,762	2,698	0	0	0	87	2,785
Simanjiro	1,421	218	0	41	0	0	1,679	618	12	123	70	0	824
Kiteto	2,773	268	0	0	70	0	3,110	1,006	67	0	339	0	1,413
Total	21,448	908	120	41	70	153	22,740	6,770	316	123	409	87	7,706

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Agro-progressing							Agro-forestry				
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total	Government	NGO / Development Project	Cooperative	Not applicable	Total
Babati	1,207	104	0	0	0	0	1,311	2,302	462	0	0	2,763
Hanang	1,397	0	0	0	0	0	1,397	2,731	0	0	0	2,731
Mbulu	2,831	0	0	0	0	87	2,918	3,102	0	0	87	3,189
Simanjiro	499	188	12	0	0	28	728	339	0	0	0	339
Kiteto	879	67	0	68	203	0	1,218	941	133	67	0	1,142
Total	6,813	360	12	68	203	115	7,572	9,416	595	67	87	10,165

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Beekeeping				Fish Farming				Other			
	Government	NGO / Development Project	Not applicable	Total	Government	NGO / Development Project	Not applicable	Total	Government	NGO / Development Project	Large Scale Farm	Total
Babati	973	94	120	1,187	246	125	0	371	458	0	0	458
Hanang	462	0	0	462	80	0	0	80	624	0	0	624
Mbulu	73	0	87	160	73	84	87	244	0	86	0	86
Simanjiro	134	0	0	134	48	0	0	48	0	91	0	91
Kiteto	472	336	0	808	407	335	0	742	329	268	57	654
Total	2,114	430	207	2,752	853	545	87	1,485	1,411	445	57	1,912

cont....EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source of Messages By District

District	Total						
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total
Babati	61,883	2,349	120	0	0	359	64,711
Hanang	39,115	233	0	0	0	772	40,120
Mbulu	39,361	170	0	0	241	853	40,625
Simanjiro	15,627	1,900	78	688	356	183	18,831
Kiteto	18,511	3,960	586	490	738	576	24,861
Total	174,497	8,612	784	1,177	1,335	2,743	189,148

15.5 EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District

District	Spacing		Use of Agrochemicals		Erosion Control		Organic Fertilizer Use		Inorganic Fertilizer Use	
	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message
Babati	12,819	12,236	2,465	1,415	10,480	6,067	7,366	4,057	1,526	458
Hanang	7,642	7,169	3,053	2,744	3,553	2,560	5,409	3,815	621	544
Mbulu	4,521	4,346	3,602	659	4,005	1,761	4,265	3,448	2,993	0
Simanjiro	3,897	2,575	1,391	1,130	891	878	640	462	885	834
Kiteto	3,990	3,150	1,508	399	2,905	1,273	1,314	380	671	0
Total	32,869	29,475	12,019	6,346	21,834	12,538	18,993	12,162	6,696	1,835

cont.... EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District

District	Use of Improved Seec		Mechanisation / LST		Irrigation		Crop		Vermin	
	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message
Babati	9,050	3,849	2,163	1,492	2,345	1,863	7,975	7,986	1,752	1,632
Hanang	5,023	3,271	851	776	542	1,099	6,027	5,652	465	940
Mbulu	4,015	497	2,990	146	401	73	3,762	3,283	2,698	2,625
Simanjiro	3,537	2,322	2,293	2,094	734	709	1,557	1,552	824	800
Kiteto	2,966	1,659	1,472	877	740	127	2,972	2,640	1,413	1,213
Total	24,592	11,598	9,769	5,385	4,760	3,871	22,293	21,112	7,152	7,210

cont.... EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District

District	Agro-progressing		Agro-forestry		Beekeeping		Fish Farming		Other	
	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message	Received Advice	Adopted Message
Babati	1,311	1,186	2,763	2,176	1,187	816	371	246	229	229
Hanang	1,240	1,323	2,573	2,569	0	156	0	0	307	153
Mbulu	2,904	2,685	3,249	2,758	73	0	157	84	0	0
Simanjiro	633	657	339	302	0	0	0	0	44	0
Kiteto	1,079	1,151	1,142	139	739	68	671	0	527	461
Total	7,168	7,001	10,066	7,943	1,999	1,040	1,199	330	1,107	843

ANIMAL CONTRIBUTION TO CROP PRODUCTION

17.1 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Number of Households Using Draft Animal to Cultivate Land By District

District	Did you use Draft animals to cultivate your land during 2002/03					
	Households Using		Household Not Using		Total	
	Number	%	Number	%	Number	%
Babati	36,800	79	9,835	21	46,635	100
Hanang	22,952	73	8,292	27	31,245	100
Mbulu	21,505	63	12,876	37	34,381	100
Simanjiro	2,743	17	13,621	83	16,364	100
Kiteto	1,024	4	24,545	96	25,569	100
Total	85,025	55	69,169	45	154,194	100

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft By Number Owned, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year

District	Type of Craft														
	Oxen			Bulls			Cows			Donkeys			Total		
	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Area Cultivated (Hectares)
Babati	54,151	136,128	39,985	7,960	12,626	1,137	11,970	687	116	1,313	236	286	75,394	149,676	41,524
Hanang	42,529	89,462	38,118	10,499	14,028	3,426	4,852	0	0	5,139	2,519	1,120	63,019	106,009	42,664
Mbulu	40,999	84,669	23,970	14,541	13,587	2,660	7,020	4,515	18	3,354	2,745	453	65,914	105,516	27,101
Simanjiro	7,605	10,411	5,419	364	144	58	817	0	0	2,031	1,799	710	10,817	12,353	6,187
Kiteto	2,429	3,671	3,487	175	66	0	-	-	-	227	356	167	2,831	4,093	3,654
Total	147,712	324,342	110,979	33,539	40,451	7,281	24,658	5,201	133	12,064	7,654	2,736	217,974	377,648	121,129

17.3 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft By Number Owned, Used and Area Cultivated (Acres) By District During 2002/03 Agriculture Year

District	Type of Craft														
	Oxen			Bulls			Cows			Donkeys			Total		
	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)	Number Owned	Number Used	Area Cultivated (acres)
Babati	54,151	136,128	98,762.2	7,960	12,626	2,808.2	11,970	687	286.2	1,313	236	706.8	75,394	149,676	102,563.5
Hanang	42,529	89,462	94,151.6	10,499	14,028	8,461.2	4,852	0	0.0	5,139	2,519	2,766.5	63,019	106,009	105,379.3
Mbulu	40,999	84,669	59,207.0	14,541	13,587	6,571.1	7,020	4,515	43.3	3,354	2,745	1,117.8	65,914	105,516	66,939.3
Simanjiro	7,605	10,411	13,384.1	364	144	143.6	817	0	0.0	2,031	1,799	1,753.5	10,817	12,353	15,281.2
Kiteto	2,429	3,671	8,612.3	175	66	0.0	.	.	.	227	356	412.7	2,831	4,093	9,025.1
Total	147,712	324,342	274,117.3	33,539	40,451	17,984.1	24,658	5,201	329.5	12,064	7,654	6,757.4	217,974	377,648	299,188.3

17.4 ANIMAL CONTRIBUTION TO CROPS: Number of Crop Growing Households Using Organic Fertilizer By Regio During 2002/03 Agriculture Year

District	Did you apply organic fertilizer during 2002/03?					
	Using Organic		Not Using Organic		Total	
	Number	%	Number	%	Number	%
Babati	19,979	34.8	26,656	27.7	46,635	30.4
Hanang	8,550	14.9	22,620	23.5	31,170	20.3
Mbulu	26,068	45.4	8,226	8.6	34,294	22.3
Simanjiro	1,793	3.1	14,354	14.9	16,147	10.5
Kiteto	1,082	1.9	24,282	25.3	25,365	16.5
Total	57,473	100.0	96,138	100.0	153,610	100.0

17.5 ANIMAL CONTRIBUTION TO CROPS: Area of Farm Yard Manure and Compost Application By District During 2002/03 Agriculture Year

District	Farm Yard Manure		Compost Area Applied		Q17212_ha	
	Area (%)	%	Area (%)	%	Area (%)	%
Babati	18,198	39.1	202	25.3	18,400	38.9
Hanang	6,627	14.2	387	48.3	7,013	14.8
Mbulu	17,973	38.6	77	9.7	18,050	38.1
Simanjiro	2,795	6.0	14	1.7	2,809	5.9
Kiteto	941	2.0	120	15.0	1,062	2.2
Total	46,534	100.0	800	100.0	47,334	100.0

CATTLE PRODUCTION

18.1 CATTLE PRODUCTION: Total Number of Households Rearing Cattle By District During 2002/03 Agriculture Year

District	Households Rearing Cattle		Households Not Rearing		Total	
	Number	%	Number	%	Number	%
Babati	25,961	55.7	20,674	44.3	46,635	100.0
Hanang	21,003	67.2	10,242	32.8	31,245	100.0
Mbulu	26,213	76.2	8,168	23.8	34,381	100.0
Simanjiro	10,405	63.6	5,959	36.4	16,364	100.0
Kiteto	6,164	24.1	19,405	75.9	25,569	100.0
Total	89,747	58.2	64,448	41.8	154,194	100.0

18.2 CATTLE PRODUCTION: Number of Cattle By Type and District as of 1st October, 2003

District	Indigenous		Improved Beef		Improved Dairy		Total Cattle	
	Number of Households	Number of Cattle	Number of Households	Number of Cattle	Number of Households	Number of Cattle	Number of Households	Number of Cattle
Babati	25,263	256,086	322	531	2,517	7,007	25,961	263,625
Hanang	20,847	216,280	0		553	2,937	21,003	219,217
Mbulu	26,126	249,790	174	608	928	3,338	26,213	253,735
Simanjiro	10,405	263,173	0		45	91	10,405	263,264
Kiteto	6,164	177,723	0		65	387	6,164	178,110
Total	88,807	1,163,051	496	1,139	4,108	13,761	89,747	1,177,951

18.3.1 CATTLE PRODUCTION: Number of Households Rearing Cattle, Head of Cattle and Average Head per Household by Herd Size as of 2002/03

Herd Size		Number of Household	%	Number of Cattle	%	Average Number Per Household
Babati	1-5	8,657	33	30,849	12	4
	6-10	8,596	33	65,047	25	8
	11-15	5,079	20	63,292	24	12
	16-20	1,975	8	35,430	13	18
	21-30	1,070	4	25,734	10	24
	31-40	247	1	8,378	3	34
	41-50	219	1	10,039	4	46
	151+	118	0	24,856	9	211
	Total	25,961	100	263,625	100	10
Hanang	1-5	6,640	32	21,473	10	3
	6-10	7,013	33	53,830	25	8
	11-15	3,876	18	48,987	22	13
	16-20	1,470	7	27,113	12	18
	21-30	1,314	6	33,431	15	25
	31-40	310	1	11,316	5	37
	41-50	157	1	7,443	3	47
	51-60	66	0	3,940	2	60
	61-100	159	1	11,684	5	74
Total	21,003	100	219,217	100	10	
Mbulu	1-5	7,926	30	26,630	10	3
	6-10	9,512	36	73,970	29	8
	11-15	4,329	17	53,492	21	12
	16-20	2,332	9	41,695	16	18
	21-30	1,602	6	37,615	15	23
	31-40	340	1	11,130	4	33
	41-50	86	0	3,852	2	45
	61-100	86	0	5,351	2	62
	Total	26,213	100	253,735	100	10
Simanjiro	1-5	2,897	28	9,784	4	3
	6-10	2,187	21	18,743	7	9
	11-15	940	9	12,632	5	13
	16-20	1,185	11	22,057	8	19
	21-30	1,120	11	27,990	11	25
	31-40	464	4	16,532	6	36
	41-50	332	3	15,065	6	45
	51-60	292	3	16,514	6	56
	61-100	656	6	51,786	20	79
	101-150	151	1	18,018	7	119
	151+	181	2	54,141	21	298
	Total	10,405	100	263,264	100	25
	Kiteto	1-5	1,104	18	3,766	2
6-10		1,233	20	9,944	6	8
11-15		857	14	10,977	6	13
16-20		205	3	3,823	2	19
21-30		1,464	24	38,101	21	26
31-40		159	3	5,876	3	37
41-50		202	3	8,777	5	43
51-60		314	5	16,944	10	54
61-100		293	5	21,188	12	72
101-150		82	1	9,499	5	116
151+		251	4	49,215	28	196
Total	6,164	100	178,110	100	29	

18.4.1 CATTLE PRODUCTION: Number of Cattle by Category and Type of Cattle as of 1st October 2003

Type	Number of Indigenous	Number of Improved Beef	Number of Improved Dairy	Total Cattle
Bulls	137,961	115	1,284	139,361
Cows	448,093		9,148	457,241
Steers	164,616		77	164,693
Heifers	140,422	289	683	141,394
Male Calves	127,806	275	771	128,852
Female Calves	144,153	460	1,797	146,411
Total	1,163,051	1,139	13,761	1,177,951

18.5 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Indigenous						Total
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	
Babati	36,548	83,475	47,402	28,164	27,623	32,874	256,086
Hanang	24,572	80,445	40,082	22,077	23,802	25,302	216,280
Mbulu	37,988	92,114	33,407	29,573	26,913	29,795	249,790
Simanjiro	21,824	121,112	24,381	32,866	30,378	32,611	263,173
Kiteto	17,029	70,947	19,343	27,743	19,089	23,572	177,723
Total	137,961	448,093	164,616	140,422	127,806	144,153	1,163,051

18.6 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Improved Beef Cattle						Total
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	
Babati	115			115	188	113	531
Hanang							
Mbulu				174	87	347	608
Simanjiro							
Kiteto							
Total	115			289	275	460	1,139

18.7 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Improved Dairy Cattle						Total
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	
Babati	1,052	3,705		683	352	1,215	7,007
Hanang	232	2,472	77		77	80	2,937
Mbulu		2,494			342	502	3,338
Simanjiro		91					91
Kiteto		387					387
Total	1,284	9,148	77	683	771	1,797	13,761

18.8 CATTLE PRODUCTION: Number of Indigenous Cattle By Category and as of 1st October, 2003

District	Category - Total Cattle						Total
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	
Babati	37,716	87,179	47,402	28,962	28,163	34,202	263,625
Hanang	24,804	82,917	40,159	22,077	23,879	25,382	219,217
Mbulu	37,988	94,608	33,407	29,746	27,342	30,644	253,735
Simanjiro	21,824	121,203	24,381	32,866	30,378	32,611	263,264
Kiteto	17,029	71,334	19,343	27,743	19,089	23,572	178,110
Total	139,361	457,241	164,693	141,394	128,852	146,411	1,177,951

GOATS PRODUCTION

19.1 GOAT PRODUCTION: Number of Agriculture Households Rearing Goats By District during the 2002/03 Agriculture Year

District	Did the Hh own, raise or manage any Goat?					
	Households Rearing Goats		Households Not Rearing Goat		Total	
	Number	%	Number	%	Number	%
Babati	23,864	51	22,771	49	46,635	100
Hanang	17,447	56	13,798	44	31,245	100
Mbulu	20,000	58	14,382	42	34,381	100
Simanjiro	12,274	75	4,090	25	16,364	100
Kiteto	6,974	27	18,595	73	25,569	100
Total	80,559	52	73,636	48	154,194	100

19.2 GOAT PRODUCTION: Total Number of Goats by Type and District as of 2st October, 2003

District	Indigenous		Improved for Meat		Improved Dairy		Total Goat	
	Number of Households	Number of Goat	Number of Households	Number of Goat	Number of Households	Number of Goat	Number of Households	Number of Goat
Babati	23,374	187,498	0	.	569	3,665	23,621	191,163
Hanang	17,370	160,079	0	.	78	390	17,370	160,469
Mbulu	20,000	184,169	87	87	0	.	20,000	184,256
Simanjiro	12,274	316,379	0	.	174	1,270	12,274	317,648
Kiteto	6,974	137,411	0	.	41	205	6,974	137,616
Total	79,992	985,536	87	87	862	5,530	80,238	991,152

19.3 GOAT PRODUCTION: Number of Households Rearing Goats, Herd of Goats and Average Head per Household by Herd Size as of 1st October, 2003

Herd Size	Number of Household	%	Number of Goat	%	Average Number Per Household
1-4	24,069	30	67,343	7	3
5-9	23,228	29	157,919	16	7
10-14	14,335	18	162,759	16	11
15-19	7,180	9	118,639	12	17
20-24	3,793	5	80,459	8	21
25-29	1,406	2	36,666	4	26
30-39	2,956	4	96,637	10	33
40+	3,270	4	270,730	27	83
Total	80,238	100	991,152	100	12

19.4 GOAT PRODUCTION: Total Number of Goats by Category and Type of Goat as of 1st October, 2003 and District

District	Number of Indigenous	Number of Improved for Meat	Number of Improved Dairy	Total Goat
Billy Goat	122,884	.	341	123,225
Castrated Goat	101,888	.	766	102,654
She Goat	497,928	.	2,309	500,237
Male Kid	127,384	.	867	128,251
She Kid	135,452	87	1,248	136,786
Total	985,536	87	5,530	991,152

19.5 GOAT PRODUCTION: Number of Indigenous Goat by Category and District as of 1st October, 2003

District	Number of Indigenous					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Babati	30,507	15,181	97,577	20,744	23,489	187,498
Hanang	20,172	9,356	86,696	22,784	21,072	160,079
Mbulu	28,358	17,293	88,417	24,817	25,283	184,169
Simanjiro	26,458	39,629	159,176	43,075	48,040	316,379
Kiteto	17,389	20,428	66,061	15,964	17,568	137,411
Total	122,884	101,888	497,928	127,384	135,452	985,536

19.6 GOAT PRODUCTION: Number of Improved Meat Goat by Category and District as of 1st October, 2003

District	Number of Improved for Meat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Babati
Hanang
Mbulu	87	87
Simanjiro
Kiteto
Total	87	87

19.7 GOAT PRODUCTION: Number of Improved Dairy Goat by Category and District as of

District	Number of Improved Dairy					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Babati	341	376	1,876	768	304	3,665
Hanang	.	390	.	.	.	390
Mbulu
Simanjiro	.	.	227	98	944	1,270
Kiteto	.	.	205	.	.	205
Total	341	766	2,309	867	1,248	5,530

19.8 GOAT PRODUCTION: Number of Total Goat by Category and District as of 1st

District	Total Goat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Babati	30,848	15,557	99,454	21,512	23,793	191,163
Hanang	20,172	9,747	86,696	22,784	21,072	160,469
Mbulu	28,358	17,293	88,417	24,817	25,370	184,256
Simanjiro	26,458	39,629	159,403	43,174	48,984	317,648
Kiteto	17,389	20,428	66,266	15,964	17,568	137,616
Total	123,225	102,654	500,237	128,251	136,786	991,152

SHEEP PRODUCTION

20.1 SHEEP PRODUCTION: Number of Households Rearing Sheep by District as of 1st October, 2002.0/ Agriculture Year

District	Did the household own, raise or manage any Sheep?					
	Households Raising Sheep		Households Not Raising Sheep		Total	
	Number	%	Number	%	Number	%
Babati	12,669	27	33,966	73	46,635	100
Hanang	11,378	36	19,867	64	31,245	100
Mbulu	16,447	48	17,935	52	34,381	100
Simanjiro	9,909	61	6,455	39	16,364	100
Kiteto	3,512	14	22,057	86	25,569	100
Total	53,914	35	100,280	65	154,194	100

20.2 SHEEP PRODUCTION: Number of Sheep by Type of Sheep and District as of 1st October, 2002/03

District	Number of Indigenous	Number of Improved for Mutton	Total Sheep
Babati	71,450	.	71,450
Hanang	83,475	710	84,186
Mbulu	97,067	1,202	98,269
Simanjiro	143,080	82	143,162
Kiteto	42,247	.	42,247
Total	437,320	1,994	439,314

20.3 SHEEP PRODUCTION: Number of Households Rearing Sheep, Herd of Sheep and Average Herd Per Household by Herd Size as of 1st October, 2002/0:

Herd Size		Total Sheep				Average Number Per Household
		Number of Household	%	Number of Sheep	%	
Babati	1-4	6,058	48	15,826	22	3
	5-9	4,868	38	31,124	44	6
	10-14	1,042	8	11,578	16	11
	15-19	475	4	8,302	12	17
	20-24	226	2	4,620	6	20
	Total	12,669	100	71,450	100	6
Hanang	1-4	6,273	55	15,522	18	2
	5-9	3,577	31	22,866	27	6
	10-14	1,011	9	11,590	14	11
	15-19	361	3	5,570	7	15
	25-29	76	1	2,052	2	27
	40+	80	1	26,586	32	333
Total	11,378	100	84,186	100	7	
Mbulu	1-4	7,833	48	22,314	23	3
	5-9	6,199	38	41,174	42	7
	10-14	1,496	9	16,652	17	11
	15-19	425	3	6,801	7	16
	20-24	73	0	1,461	1	20
	25-29	173	1	4,592	5	27
	30-39	159	1	5,274	5	33
	Total	16,359	100	98,269	100	6
Simanjiro	1-4	2,390	24	6,186	4	3
	5-9	2,838	29	17,989	13	6
	10-14	1,430	15	15,303	11	11
	15-19	1,102	11	18,657	13	17
	20-24	670	7	14,019	10	21
	25-29	296	3	7,744	5	26
	30-39	502	5	15,951	11	32
	40+	632	6	47,312	33	75
Total	9,860	100	143,162	100	15	
Kiteto	1-4	1,111	32	2,951	7	3
	5-9	1,005	29	6,720	16	7
	10-14	595	17	6,744	16	11
	15-19	252	7	4,137	10	16
	20-24	296	9	6,545	15	22
	40+	212	6	15,150	36	71
Total	3,471	100	42,247	100	12	
Total	1-4	23,665	44	62,799	14	3
	5-9	18,487	34	119,872	27	6
	10-14	5,574	10	61,867	14	11
	15-19	2,614	5	43,466	10	17
	20-24	1,265	2	26,646	6	21
	25-29	545	1	14,389	3	26
	30-39	662	1	21,225	5	32
	40+	925	2	89,048	20	96
Total	53,737	100	439,314	100	8	

20.4 SHEEP PRODUCTION: Total Number of Sheep By Breed Type During the 2002/03 Agriculture Year

Breed	Number of Indigenous	Number of Improved for Mutton	Total Sheep
Ram	85,483	166	85,649
Castrated Sheep	39,031	172	39,203
She Sheep	210,099	1,115	211,215
Male Lamb	49,869	163	50,032
She Lamb	52,838	378	53,215
Total	437,320	1,994	439,314

20.5 SHEEP PRODUCTION: Total Number of Indigenous Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year

District	Number of Indigenous					Number of Indigenous
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Babati	13,571	4,840	36,042	9,183	7,814	71,450
Hanang	33,456	4,167	31,566	6,885	7,402	83,475
Mbulu	16,590	8,143	48,788	11,238	12,308	97,067
Simanjiro	16,662	15,569	73,499	17,592	19,758	143,080
Kiteto	5,204	6,312	20,204	4,972	5,556	42,247
Total	85,483	39,031	210,099	49,869	52,838	437,320

20.6 SHEEP PRODUCTION: Total Number of Improved Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year

District	Number of Improved for Mutton					Number of Improved for Mutton
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Babati
Hanang	80	.	473	77	80	710
Mbulu	86	172	601	86	257	1,202
Simanjiro	.	.	41	.	41	82
Kiteto
Total	166	172	1,115	163	378	1,994

20.7 SHEEP PRODUCTION: Total Number of Sheep by Category of Sheep and District as of 1st October, 2002/03 Agriculture Year

District	Total Sheep					Total Sheep
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Babati	13,571	4,840	36,042	9,183	7,814	71,450
Hanang	33,536	4,167	32,039	6,962	7,482	84,186
Mbulu	16,675	8,315	49,389	11,324	12,565	98,269
Simanjiro	16,662	15,569	73,540	17,592	19,799	143,162
Kiteto	5,204	6,312	20,204	4,972	5,556	42,247
Total	85,649	39,203	211,215	50,032	53,215	439,314

PIGS PRODUCTION

21.1 PIG PRODUCTION: Number of Households Raising Pig by District during 2002/03 Agriculture Year

District	Did the household own, raise or manage any Pig?					
	Households Raising Pig		Households Not Raising Pig		Total	
	Number	%	Number	%	Number	%
Babati	1,971	4.2	44,664	95.8	46,635	100.0
Hanang	1,089	3.5	30,156	96.5	31,245	100.0
Mbulu	13,166	38.3	21,215	61.7	34,381	100.0
Simanjiro	12	0.1	16,352	99.9	16,364	100.0
Kiteto	255	1.0	25,315	99.0	25,569	100.0
Total	16,493	10.7	137,701	89.3	154,194	100.0

21.1 PIG PRODUCTION: Number of Households Raising Pig by District during 2002/03 Agriculture Year

District	Number of Household	Number of Pig	Average Number Per Household
Babati	1,861	12,254	7
Hanang	1,089	2,235	2
Mbulu	12,993	26,415	2
Simanjiro	12	25	2
Kiteto	255	306	1
Total	16,210	41,236	3

21.2 PIG POPULATION: Total Number of Pigs by Category of Pigs and District as of 1st October, 2003

District	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	Total
Babati	1,530	3,156	3,060	2,817	1,691	12,254
Hanang	526	77	1,160	394	79	2,235
Mbulu	6,077	3,414	9,994	3,062	3,868	26,415
Simanjiro	12		12			25
Kiteto	52		189		66	306
Total	8,198	6,647	14,415	6,273	5,703	41,236

21.3 PIG POPULATION: Pig Offtake By Type of Pig and District

District	Total Pig Offtake				
	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet
Babati					
Hanang	205	79	142		
Mbulu	1,112	55,251	1,113	1,371	54,144
Simanjiro					
Kiteto					
Total	1,317	55,330	1,255	1,371	54,144

LIVESTOCK PESTS AND PARASITE CONTROL

22.5 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households reporting to have encountered tsetse flies problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year

District	Agricultural Households Encountering Tsetse Flies		Agricultural Households NOT Encountering Tsetse Flies		Total	
	Number	% age	Number	% age	Number	% age
Babati	6,933	24	22,524	76	29,457	100
Hanang	1,912	9	18,975	91	20,887	100
Mbulu	4,620	18	20,368	82	24,988	100
Simanjiro	9,773	78	2,713	22	12,485	100
Kiteto	1,899	26	5,519	74	7,418	100
Total	25,137	26	70,097	74	95,235	100

22.6 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households by Method of Tsetse flies Control during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year

District	Method of Tsetse Flies Control											
	None		Spray		Dipping		Trapping		5		Total	
	Number	% age	Number	% age	Number	% age	Number	% age	Number	% age	Number	% age
Babati	1,778	26	4,201	61	832	12	0	0	122	2	6,933	100
Hanang	869	45	963	50	0	0	0	0	80	4	1,912	100
Mbulu	3,187	69	1,004	22	429	9	0	0	0	0	4,620	100
Simanjiro	3,298	34	3,143	32	2,656	27	37	0	639	7	9,773	100
Kiteto	1,094	58	607	32	198	10	0	0	0	0	1,899	100
Total	10,227	41	9,917	39	4,115	16	37	0	841	3	25,137	100

OTHER LIVESTOCK

FISH FARMING

28.1 FISH FARMING: Number of Agricultural Households involved in Fish Farming and District, 2002/03 Agricultural Year

District	Households Doing Fish Farming		Households NOT Doing Fish Farming		Total	
	Number	%	Number	%	Number	%
Babati	0	0.0	46,635	100.0	46,635	100.0
Hanang	0	0.0	31,245	100.0	31,245	100.0
Mbulu	84	0.2	34,297	99.8	34,381	100.0
Simanjiro	0	0.0	16,364	100.0	16,364	100.0
Kiteto	69	0.3	25,501	99.7	25,569	100.0
Total	153	0.1	154,041	99.9	154,194	100.0

28.2 FISH FARMING: Number of Agricultural Households By System of Farming and District, 2002/03 Agricultural Year

District	Fish Farming System	
	Dug out Pond	Total
Mbulu	84	84
Total	84	84

28.3 FISH FARMING: Number of Agricultural Households By Source of Fingerlings and District, 2002/03 Agricultural Year

District	Source of Fingerling	
	NGOs / Project	Total
Mbulu	84	84
Total	84	84

28.4 FISH FARMING: Number of Agricultural Households By Location of Selling Fish and District, 2002/03 Agricultural Year

District	Neighbor	Total
	Number	Number
Mbulu	84	84
Total	84	84

28.5 FISH FARMING: Total Number of Fish Harvested by Type and District, 2002/03 Agricultural Year

District	Number of Tilapia	Number of Carp	Number of Others
Mbulu	21,094	0	0
Kiteto	-	-	-
Total	21,094	0	0

LIVESTOCK EXTENSION

29.1a LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Advice By Type of Service Provider and District, 2002/03 Agricultural Year

District	Did Household receive livestock advice during 2002/03?					
	Number of Agricultural Households Receiving Advice		Agricultural Households NOT Receiving Advice		Total	
	Number	%	Number	%	Number	%
Babati	7,549	16	39,086	84	46,635	100
Hanang	3,912	13	27,333	87	31,245	100
Mbulu	3,798	11	30,583	89	34,381	100
Simanjiro	5,468	33	10,896	67	16,364	100
Kiteto	1,316	5	24,253	95	25,569	100
Total	22,043	14	132,151	86	154,194	100

29.1b LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Feeds and Proper Feeding By Source and District, 2002/03 Agricultural Year

District	Source of Advice		
	Government	NGO / Development Project	Total
Babati	1,472	522	1,995
Hanang	78	0	78
Mbulu	3,102	0	3,102
Simanjiro	410	28	438
Kiteto	268	0	268
Total	5,331	550	5,881

29.2 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Housing By Source and District, 2002/03 Agricultural Year

District	Source of Advice			
	Government	NGO / Development Project	Other	Total
Babati	2,751	544	117	3,412
Mbulu	2,683	0	0	2,683
Simanjiro	593	256	0	849
Kiteto	665	0	0	665
Total	6,691	800	117	7,608

29.3 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Proper Milking By Source and District, 2002/03 Agricultural Year

District	Source of Advice		
	Government	NGO / Development Project	Total
Babati	1,944	439	2,383
Hanang	78	0	78
Mbulu	3,016	0	3,016
Simanjiro	702	73	775
Kiteto	462	0	462
Total	6,202	512	6,714

29.4 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Milk Hygiene By Source and District, 2002/03 Agricultural Year

District	Source of Advice			
	Government	NGO / Development Project	not applicable	Total
Babati	1,830	449	0	2,279
Hanang	78	0	0	78
Mbulu	3,190	0	0	3,190
Simanjiro	976	45	49	1,070
Kiteto	527	0	0	527
Total	6,601	494	49	7,145

29.5 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Disease Control By Source and District, 2002/03 Agricultural Year

District	Source of Advice				
	Government	NGO / Development Project	Large Scale Farmer	Other	Total
Babati	5,416	887	0	0	6,302
Hanang	3,294	0	0	80	3,374
Mbulu	3,362	0	0	0	3,362
Simanjiro	4,504	140	48	36	4,727
Kiteto	792	67	57	0	916
Total	17,367	1,094	104	117	18,682

29.6 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Herd /Flock Size and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Developm ent Project	not applicable	
Babati	2,069	125	122	2,316
Hanang	1,550	0	0	1,550
Mbulu	2,668	0	0	2,668
Simanjiro	436	0	0	436
Kiteto	133	67	0	201
Total	6,856	193	122	7,170

29.7 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice Pasture Establishment and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice		
	Government	NGO / Developm ent Project	Total
Babati	1,179	522	1,701
Hanang	312	0	312
Mbulu	2,842	0	2,842
Simanjiro	307	0	307
Kiteto	264	269	532
Total	4,903	791	5,694

29.8 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Group Formation and Strengthening By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Developm ent Project	not applicable	
Babati	1,433	522	0	1,955
Hanang	941	0	0	941
Mbulu	1,377	0	0	1,377
Simanjiro	1,284	92	36	1,412
Kiteto	332	133	0	465
Total	5,366	748	36	6,150

29.9 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Calf Rearing By Source and District, 2002/03 Agricultural Year

District	Source of Advice			Total
	Government	NGO / Developm ent Project	Large Scale Farmer	
Babati	2,192	342	0	2,534
Hanang	309	0	0	309
Mbulu	3,103	0	0	3,103
Simanjiro	571	0	0	571
Kiteto	200	66	67	333
Total	6,375	407	67	6,850

LABOUR USE

HOUSEHOLD FACILITIES

APPENDIX III QUESTIONNAIRES

1.0 IDENTIFICATION DETAILS			
1.1 Location			
S/N	Location Name	Codes	
1.1.1	Region	<input type="text"/>	
1.1.2	District	<input type="text"/>	
1.1.3	Ward	<input type="text"/>	
1.1.4	Village	<input type="text"/>	
1.2 Details of the respondent and household head			
S/N		Codes	
1.2.1	Name & number of local leader	<input type="text"/>	
1.2.2	Name & number of household head	<input type="text"/>	
1.2.3	Sex of household head (Male = 1, Female = 2)	<input type="text"/>	
1.2.4	Name of respondent	<input type="text"/>	
1.2.5	Relationship of Respondent to Household Head		
<p>Relationship to household head codes (Q 1.2.5) Head of Household.....1 Son/Daughter3 Grandson/Granddaughter5 Other (friend, employee, etc)...8 Spouse2 Father/Mother4 Other relative.....6</p>			
2.0 ACTIVITIES OF THE HOUSEHOLD			
2.1	Type of Agriculture Household	<input type="text"/>	
<p>Agriculture household codes(Q2.1) Crops only.....1 Livestock only2 Pastoralist.....3 Crops and Livestock4</p>			
2.2	Rank the following livelihood activities/source of income of the household in order of importance		
S/N	Livelihood/source of income activity.	Rank in order of importance 1=most 7=least	How important are each of these activities expressed in percentage.
	(1)	(2)	(3)
2.2.1	Annual Crop farming	<input type="text"/>	<input type="text"/> %
2.2.2	Permanent crop farming	<input type="text"/>	<input type="text"/> %
2.2.3	Livestock keeping/herding	<input type="text"/>	<input type="text"/> %
2.2.4	Off Farm Income	<input type="text"/>	<input type="text"/> %
2.2.5	Remittances	<input type="text"/>	<input type="text"/> %
2.2.6	Fishing/hunting and gathering	<input type="text"/>	<input type="text"/> %
2.2.7	Tree/forest resources (eg honey, firewood, timber,etc)	<input type="text"/>	<input type="text"/> %
			<input type="text"/> %

7.3 PERMANENT/PERENNIAL CROPS AND FRUIT TREE PRODUCTION

7.3.1 Does your household have any permanent/perennial crops or fruit trees (Yes=1, No=2) [1]

7.3.2 For each of the permanent crops and fruit trees owned by the household provide the following information

Main data entry table with columns: Size of production unit (MONOCROP, MIXED CROP), Inputs (Irrigation, Fertiliser, Herbicide, Fungicide, Pesticide), Harvesting & Storage (Area Harvested, Number of mature plants, main product code, Quantity harvested, If no harvest give reason, Quantity Stored), Marketing (Quantity sold, mostly sold to).

Irrigation Use (Col 6)
Used on all crop1
Used on most crop2
Used on half crop3
Used on small amount of crop.4
Not used on crop5

Fertiliser codes (Col 7)
Mostly Farm Yard Manure.....1
Mostly Compost2
Mostly Inorganic fertiliser3
No fertiliser applied4

Agrochemical use codes (Col 8, 9 & 10)
Used on all crop1
Used on 3/4 of crop2
Used on 1/2 of crop3
Used on 1/4 of crop4
less than 1/4 of crop5
Not used6

Main product (Col 13)
Dry Grain.....1
Green cob/green pod..2
Green leaves & Stem..3
Straw, dry stems etc ...4
Root, tuber, etc5
Flower6
Fruit/bunch.....7
Other8
Not harvested yet9

Main Reason for no harvest(Col 15)
Crop not harvested yet1
Drought2
Rain/flood damage3
Fire damage4
Pest damage5
Animal damage6
Theft7
Other8
Not applicable9

Mostly sold to (Col 18)
Neighbour.....01
Local market/trade store....02
Secondary Market03
Tertiary Market04
Marketing Coop05
Farmer Association06
Largescale farm07
Trader at farm08
Contract Partner09
Did not sell10
Other98

Definitions and working page for page 6

Permanent Crop:
 Permanent crops: are sown or planted once and then , they occupy the land for some years and need not to be replanted after each annual harvest. Permanent crops are mainly trees (e.g., apples) but also bushes and shrubs (e.g., berries), palms (e.g., dates), vines (e.g., grapes), herbaceous stems (e.g., bananas) and stemless plants (e.g., pineapples).

Total number of plants:
 This includes both mature harvestable plants and immature non harvestable plants.

Number of mature plants: This is the number of plants which bared harvest.

Instructions for Permanent crop mono stands and mixtures

A. For fields that are **monocrop permanent**, **ONLY** enter the **area of plants in column 3**.

B. For fields that are **mixed permanent** calculate the area of each crop based on the % **occupied by each crop method** (NOT using the number of trees method) and **ONLY** enter the area in **column 4**

C. For fields that are **mixed permanent/annual** either:
 - **ONLY** enter the **area in column 4** if the area of the permanent crop was based on the % **occupied by each crop method**

OR

- **ONLY** enter the **number of trees in column 5** if the number of permanent crop plants was provided

Permanent crops (oils):

Code	Crop	Ground area/plant
44	Palm Oil	0.00049
45	Coconut	0.00037
46	Cashewnut	0.00062

Permanent (Cash crops)

Code	Crop	Ground area/plant
53	Sisal	0.00012
54	Coffee	0.00049
55	Tea	0.00037
56	Cocoa	0.00049
57	Rubber	0.00099
58	Wattle	0.00099
59	Kapok	0.00124
60	Sugar Cane	0.00012
61	Cardamom	0.00049
63	Tamarin	0.00099
64	Cinamon	0.00124
65	Nutmeg	0.00099
66	Clove	0.00074
18	Black Pepper	0.00037
34	Pigeon pea	0.00025
21	Cassava	0.00019
75	Pineapple	0.00006

Permanent Crops:

Code	Crop	Ground area/plant
70	Passion Fruit	0.00074
71	Banana	0.00037
72	Avocado	0.00099
73	Mango	0.00099
74	Papaw	0.00037
76	Orange	0.00074
77	Grapefruit	0.00074
78	Grapes	0.00012
79	Mandarin	0.00074
80	Guava	0.00074
81	Plums	0.00074
82	Apples	0.00074
83	Pears	0.00074
84	Peaches	0.00074
85	Lime/lemon	0.00074
68	Pomelo	0.00099
69	Jack fruit	0.00074
97	Durian	0.00074
98	Bilimbi	0.00074
99	Rambutan	0.00074
67	Bread fruit	0.00099
38	Malay apple	0.00074
39	Star fruit	0.00074

Working Area/calculation space

Definition and working page for page 8**Question Specific definitions (Section 9.0)****Crop Storage, Section 9****Method of Storage (column 4)**

- **Locally made structure:** The structures that have been inherited from their fore fathers
- **Improved locally made structure:** Traditional structures that have been improved using modern technology.
- **Normal duration of storage:** Often there are stored stocks from different seasons and different years. The normal duration refers to the number of months that the most of the crop is stored for.

Marketing problems Q 10.2 and 10.3 col 2:

- **Farmer Association:** A village or community based group of farmers who have formed an organisation to purchase inputs/sell/store their products in order to achieve a better price for their products.
- **Cooperative Union:** Large inter-village /community organisation set up on a district/regional or national basis for providing inputs, marketing and storing farmers products.
- **Government Regulatory board:** Government control body for setting prices and controlling quality of certain agriculture commodities.

Procedures for Questions**Q 9.2 Details of Crop Storage:**

1. For the crops listed indicate if the household stored any during 2002/03 in column 2.
2. Check that the crops correspond to the crop lists in Q 7.1.2, 7.2.2 & 7.3.2. If there is a difference inquire on the reason why. It is possible that a crop was missed during the enumeration of these questions and if so make necessary amendments
3. For the listed crops give details of storage.

Q 10.2 Details on Crop Marketing:

1. For each of the crops listed indicate the main problems in marketing during 2002/03 in column 2.
2. Check if the crops correspond to the crop lists list in Q 7.1.2, 7.2.2 & 7.3.2. If there is a difference inquire on the reason why. It is possible that a crop was missed during the enumeration of these questions and if so make necessary amendments

Q 10.3 Ranking of market problems:

Rank in order of importance the 5 most important marketing problems from the codes in the Market Problems code box.

Working Area/calculation space

Definition and working page for page 10**Question Specific Definitions (Q 12.2)****Farm Implements (Col 1):**

Hand powered Sprayer: Knapsack or bicycle pump sprayer

Reason for not using (Col 6): Be careful about using "too much labour required" as this code generally refers to hand hoes only. The codes for this should "**NOT**" be read out to the farmer as a prompt.

Note: If remittance is given as the main source of finance check for a response to remittances in **question 2.2.5**

Question Specific Definitions (Q 13.0)**Section 13.0 Credit for Agriculture Purposes**

Credit is defined as finance in the form of cash or in-kind contributions (eg direct provision of inputs, machinery, livestock or other material) for the purpose of crop and livestock production whereby the value of the credit must be paid back to the borrower. The value of repayment may either be with interest or interest free.

Credit may be paid back in the form of cash or agriculture produce.

Section 13.0 Credit for Agriculture Purposes

Value of credit: is the amount in cash received from the borrower. If the credit was paid in-kind, estimate the value of this.

Value of repayment: This is the amount to be repaid to the borrower and includes the principal amount (value of credit) plus any interest repayment. If the credit is paid back in agriculture produce, then the cash value of this must be estimated.

Period of repayment: This is the time in **months** the borrower has given for full repayment.

Procedures for questions**Q 12.0 Farm Inputs**

1. Indicate in column 2 and 3 whether each of the implements were used or not.
2. Complete cols 4, 5, 6, and 8 for inputs that are used and place '9' in column 7 (for not applicable).
3. Complete cols 7 & 8 for inputs not used.

Section 13.2 Source of agriculture credit

If the farmer obtained credit from more than one source then use the columns "a", "b" and "c" for the different sources of credit. Start with the main source of credit in column "a".

NOTE: Check for use of inputs in column 7, 8 & 9 of questions 7.1.2, 7.2.2 & 7.3.2.

Working Area/calculation space

Definitions and working page for page 12

Question Specific Definitions

Crop Extension Advice (Section 15.2)

Mechanisation/LST: LST means Labour Saving Technology

Section 16.0 Livelihood constraints

16.1 List the five most important problems in order of most importance:

1. Read out the list of constraints to the respondent and ask him to select the ones that are a problem. Place a ✓ against the constraints that are a problem.
2. Read the selected constraints and ask the farmer to select 5 which create the largest problems
3. Ask the farmer to list these in order of importance and enter in column 2

16.2 List the five least important problems in order of least importance:

1. Read out the list of constraints to the respondent and ask him to select the ones that are **NOT** a problem. Place an ✗ against the constraints that are **NOT** a problem.
2. Read the selected constraints and ask the farmer to select 5 which create the least problems
3. Ask the farmer to list these in order of least importance and enter in column 2

<p>Definitions and working page for page 13</p> <p>General definitions for page 13</p> <p>Cattle Intake during 2002/03: Cattle purchased, given or born which increases the number of cattle in the herd.</p> <p>Cattle Offtake during 2002/03: Cattle removed from the herd, either by selling, hh consumption, given away or stolen.</p>	<p>Section 18.0 Cattle Population, Intake & Offtake.</p> <p>NOTE: Section 18.1 is for the current population (as of 1st October 2003); Section 18.2 and 18.3 is for movement in and out of the herd during the 2002/03 agriculture year. Section 18.4 is for diseases encountered during the agriculture year.</p> <p>1. If the household has cows, you would normally expect them to have calves in column 8</p> <p>2. If calves are reported in column 2, 3, or 4 (18.2.6, 18.2.5) then there must be at least that number repeated in column 8</p> <p>Note: If the farmer reports sales of cattle the importance of this must be reflected in Q 2.2.3</p> <p>Section 18.5 If cattle are reported to have died in Column 5 then at least that number should be reported in 18.4 col 4</p>
<p>Question Specific Definitions (Section 18.0)</p> <p>Cattle type (Q 18.2 & 18.4, Col 1)</p> <p>Bull: Mature Uncastrated male cattle used for breeding</p> <p>Cow: Mature female cattle that has given birth at least once</p> <p>Steer: Castrated male cattle over 1 year</p> <p>Heifer: Female cattle of 1 year up to the first calving</p> <p>Calves: Young cattle under 1 year of age</p>	<p>Working area for page 13</p>
<p>Average Value per Head (Q 18.3, (Col 7 & 9) & 18.4 (Col 3, 5 & 7))</p> <p>In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.</p>	
<p>Cattle vaccination (18.5 col 1)</p> <p>ECF: East Coast Fever</p> <p>FMD: Foot and Mouth Disease</p> <p>CBPP: Contagious Bovine Pleura Pneumonia</p>	

Definitions and working page for page 14**Goat definitions for page 14**

Goat Intake during 2002/03: Goat purchased, given or born which increases the number of goats in the herd.

Goat Offtake during 2002/03:

Goat removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 19.0)**Goat type (Q 19.2 & 19.4, Col 1)**

Billy Goat (he-goat): Mature **Uncastrated** male goat used for breeding

Castrated goat: Male goat that has been castrated.

She Goat: Mature female goat over 9 months of age

Kid: Young goat under 9 months of age.

Average Value per Head (Q 19.3, (Col 7 & 9) & 19.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Goat vaccination (19.5 col 1)

FMD: Foot and Mouth Disease

CCPP: Contagious Caprine Pleura Pneumonia

LSD: Lumpy Skin Disease

Section 19.0 Goat Population, Intake & Offtake.

NOTE: Section 19.1 is for the current population (as of 1st October 2003); Section 19.2 and 18.3 is for movement in and out of the herd during the 2002/03 agriculture year. Section 19.4 is for diseases encountered during the agriculture year.

1. If the household has she goats, you would normally expect them to have kids in column 8
2. If kids are reported in column 2, 3, or 4 (19.2.6, 19.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of goats the importance of this must be reflected in Q 2.2.3

Section 19.5 If goats are reported to have died in Column 5 then at least that number should be reported in 19.4 col 4

Working area for page 14

Definitions and working page for page 15**Sheep definitions for page 15**

Sheep Intake during 2002/03: Sheep purchased, given or born which increases the number of Sheep in the herd.

Sheep Offtake during 2002/03:
Sheep removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 20.0)**Sheep type (Q 20.2 & 20.4, Col 1)**

Ram: Mature **Uncastrated** male goat used for breeding

Castrated sheep: Male sheep that has been castrated.

Ewe: Mature female sheep over 9 months of age

Lamb: Young sheep under 9 months of age.

Average Value per Head (Q 20.3, (Col 7 & 9) & 20.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Sheep vaccination (20.5 col 1)

FMD: Foot and Mouth Disease

CCPP: Contagious Caprine Pleura Pneumonia

Section 20.0 Sheep Population, Intake & Offtake.

NOTE: Section 20.1 is for the current population (as of 1st October 2003); Section 20.2 and 20.3 is for movement in and out of the herd during the 2002/03 agriculture year. Section 20.4 is for diseases encountered during the agriculture year.

1. If the household has ewes, you would normally expect them to have kids in column 8
2. If lambs are reported in column 2, 3, or 4 (20.2.6, 20.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of Sheep the importance of this must be reflected in Q 2.2.3

Section 20.5 If Sheep are reported to have died in Column 5 then at least that number should be reported in 20.4 col 4

Working area for page 15

|

Definitions and working page for page 16**Pigs definitions for page 16**

Pig Intake during 2002/03: Pigs purchased, given or born which increases the number of Pigs in the production unit.

Pig Offtake during 2002/03:

Pigs removed from the production unit, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 21.0)**Pigs type (Q 21.2 & 21.4, Col 1)**

Boar: Mature **Uncastrated** male pig used for breeding

Castrated Pig: Male pig that has been castrated.

Sow: Mature female pig that has given birth to at least one litter of pigs.

Gilt: Female pig of 9 months up to the first farrowing.

Piglet: Young pig under 3 months of age.

Average Value per Head (Q 21.3, (Col 7 & 9) & 21.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Pig vaccination (21.5 col 1)

ASF: African Swine Fever

Section 21.0 Pig Population, Intake & Offtake.

NOTE: Section 21.1 is for the current population (as of 1st October 2003); Section 21.2 and 21.3 is for movement in and out of the herd during the 2002/03 agriculture year. Section 21.4 is for diseases encountered during the agriculture year.

1. If the household has sows, you would normally expect them to have piglets in column 8
2. If piglets are reported in column 2, 3, or 4 (20.2.6, 20.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of Pigs the importance of this must be reflected in Q 2.2.3

Section 20.5 If Pigs are reported to have died in Column 5 then at least that number should be reported in 20.4 col 4

Working area for page 16

|

Definition and working page for page 17
Question Specific Definitions Section 26.0)
Question Specific Definitions Section 27.0)
Access to functional Livestock Structures/accessories (Section 27.0):

NOTE: The structures must be functional. If they are not working/derelect then they should not be included. The distance to the next nearest functional structure should be taken.

Spray Race: A fixed spray structure on an animal race for spraying acaricide

Cattle crush: Corridor structure for restraining cattle.

Abattoir: Large building designed for slaughtering a large amount of animals. It normally has complex structures to assist in the slaughter and storage and a high level of hygiene is maintained.

Slaughter Slab: Concrete slab designed for slaughtering a small amount of animals

Hides: obtained from Cattle

Skins: Obtained from sheep and goats

Hide/Skin Shed: Shed for curing/tanning animal skins and hides

Village holding Pen: Enclosure for containing large amount of livestock which is owned communally.

Drencher: Device for orally administering medicine to livestock. If no product was sold in 2002 enter "0" in columns 6, 7 & 9.

Procedures for questions
Section 23.0 - Other Livestock:

1. The current number includes both adult and young animals. For example The number of chickens in col 1 would include adults and chicks.

Section 26.0 - Outlets for livestock:

Using the codes enter the outlets for the sale of different livestock in order of importance. If there are, for example, only 2 outlets mark the rest with a "X".

Definition and working page for page 20**Household facilities (Section 34):****Number of rooms used for sleeping in the household (Q 34.1)**

Include sitting room, dining room, kitchen, etc if used for sleeping. It also includes rooms outside the main dwelling

A room is defined as a space which is separate from the rest of the building by a permanent wall or division. A building/house that is not divided into rooms is considered to have one room.

Household assets (Q 34.2): these assets must be functioning. Do not include if broken.

Access to drinking water (Q 34.4): If there is more than one source, use the one, which the hh uses most frequently.

Main source of hh cash income:

Activity that provides the hh with the most cash during 2002/03 agriculture year.

